

THE CONTRACT JOURNAL

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THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

No. 4,241 82nd YEAR

THURSDAY, OCTOBER 6, 1960

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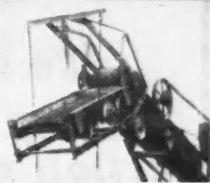
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The Loadascreen saves time, labour and costs — more profit in your pocket!



Close up of the delivery end of the Loadascreen, showing one screen only, for 2-size screening. Double deck screens are available for screening into three sizes.

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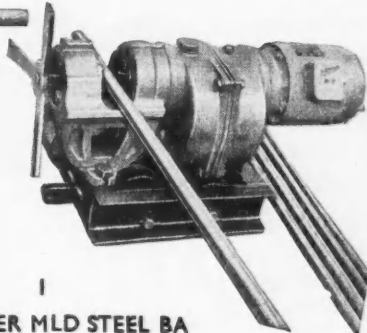
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THE "SILKSTONE" FLUSH DOOR

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Aggregate Feed Apron to keep aggregates separate and guide Shovel to the right point every time!

Self clean non-clog drum that will mix wet or very dry concrete!

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Hydraulically lifted loader — no topshaft, no wire ropes, no clutches.

Send for list 6019 and full particulars — it's free and will be sent by return of post!

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a name familiar
to ALL on sites
both large
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DIESEL DUMPERS

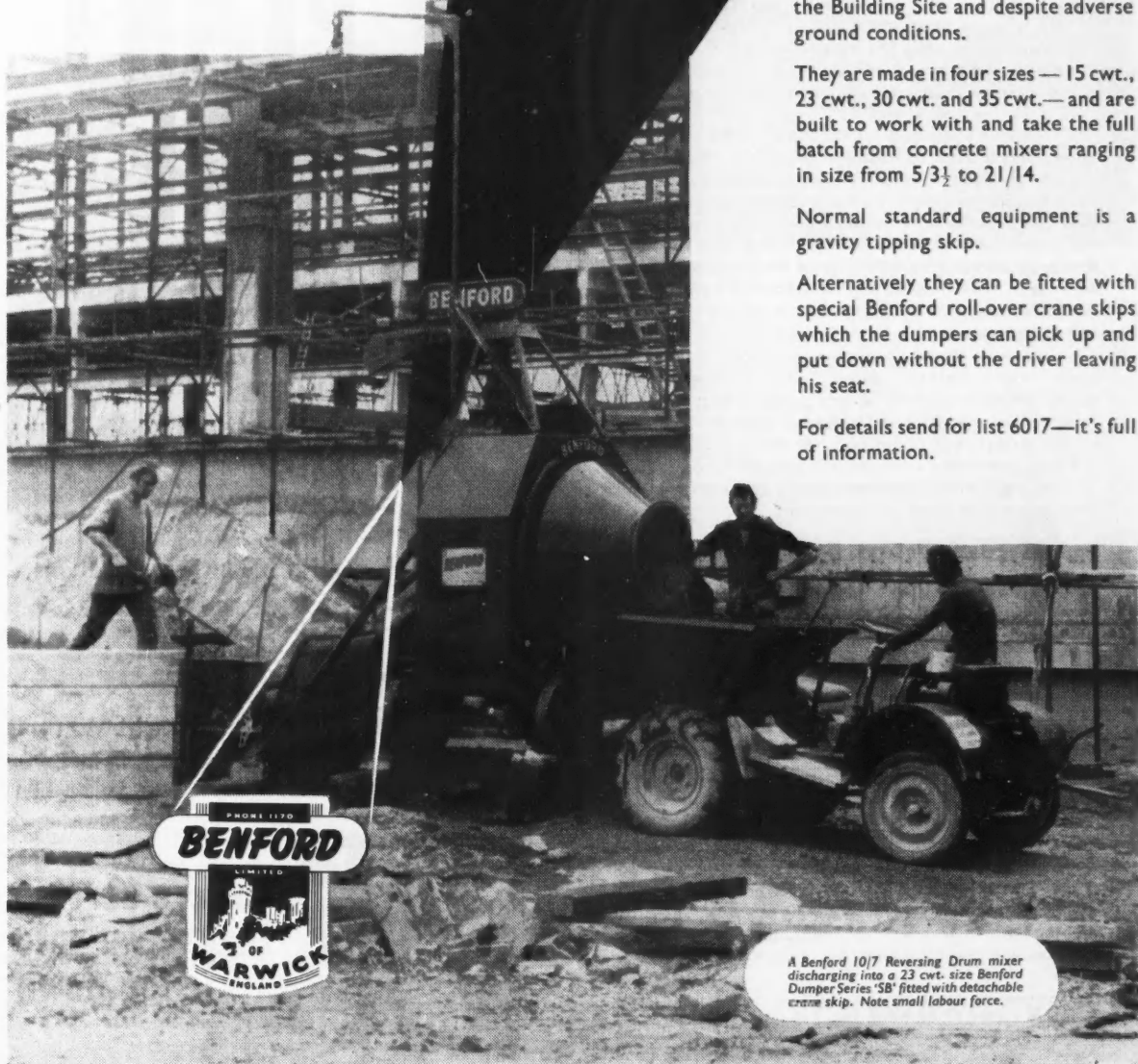
Benford Dumpers are labour saving, all-purpose carriers designed for every day use by all and sundry on the Building Site and despite adverse ground conditions.

They are made in four sizes — 15 cwt., 23 cwt., 30 cwt. and 35 cwt. — and are built to work with and take the full batch from concrete mixers ranging in size from 5/3½ to 21/14.

Normal standard equipment is a gravity tipping skip.

Alternatively they can be fitted with special Benford roll-over crane skips which the dumpers can pick up and put down without the driver leaving his seat.

For details send for list 6017 — it's full of information.



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238 and 254
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MANUFACTURERS OF
CONCRETE BLOCK AND
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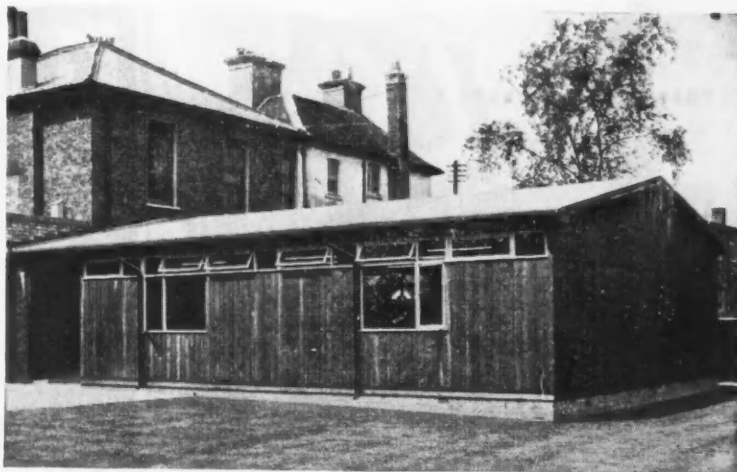
Hospitals

Offices

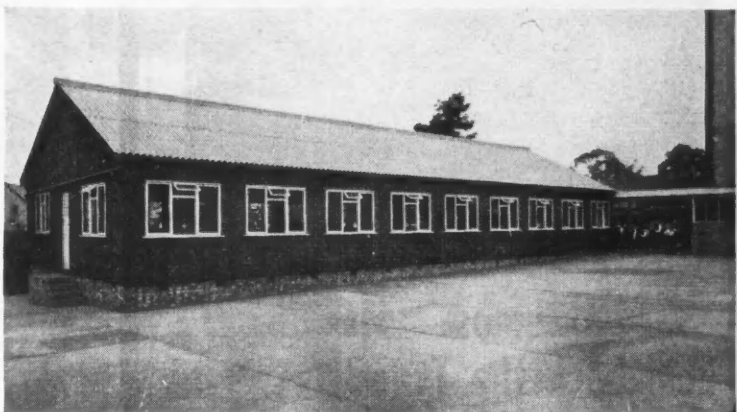
Canteens

Showrooms

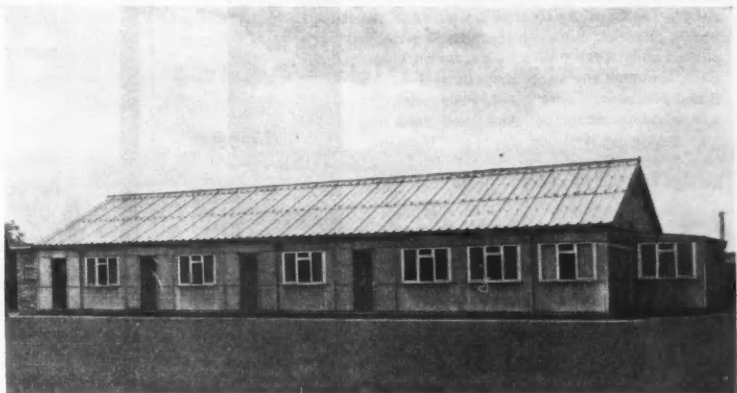
Estate Offices



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DINING HALL FOR THE SACRED HEART CONVENT SCHOOL, HITCHIN, HERTS.
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SPORTS PAVILION. Photograph by courtesy of W. T. Glover & Co., Ltd., Manchester.

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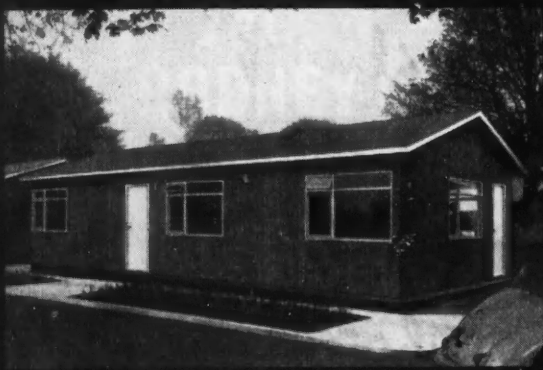
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for long-running reliability

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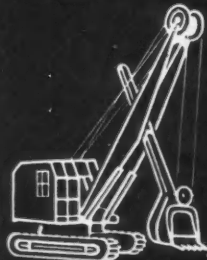
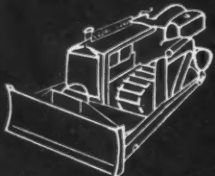
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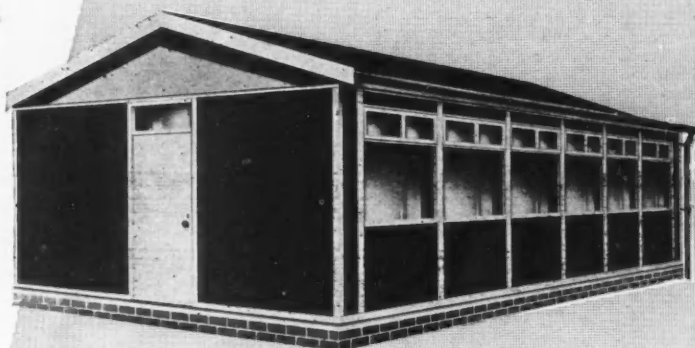
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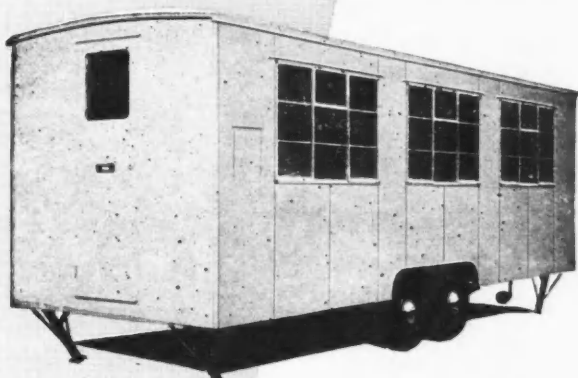


PORTABLE TIMBER BUILDINGS



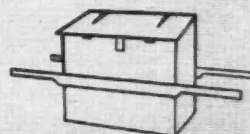
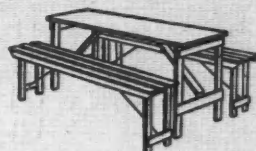
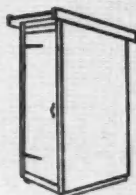
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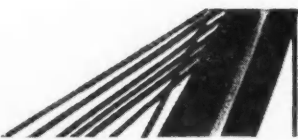
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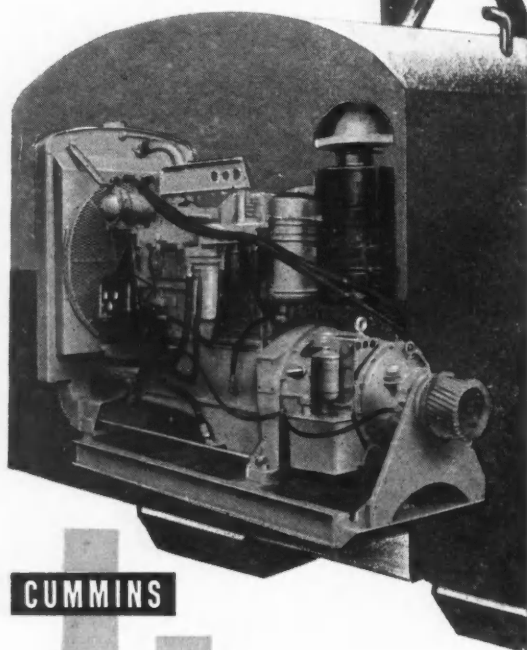
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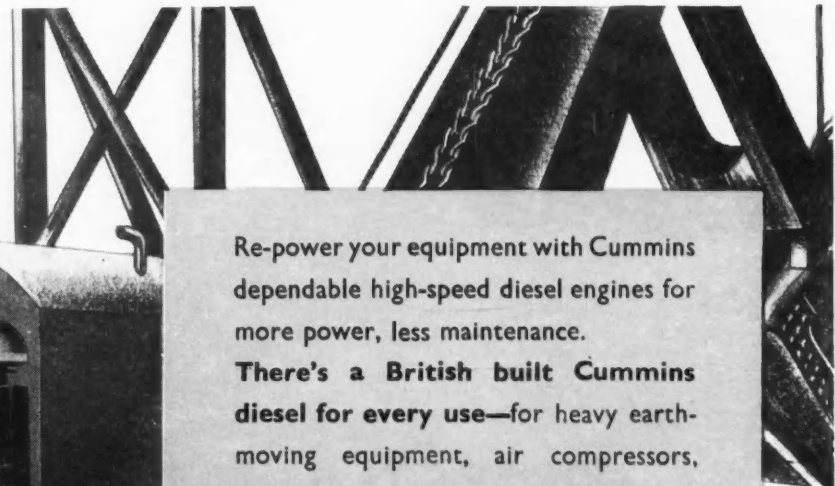
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4 in 1 bucket
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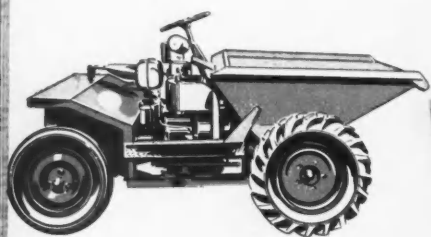


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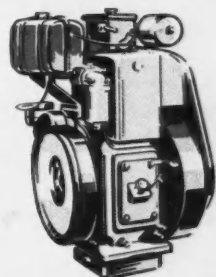
and reliability of BIG dumper
form without increasing
manoeuvrability in con-



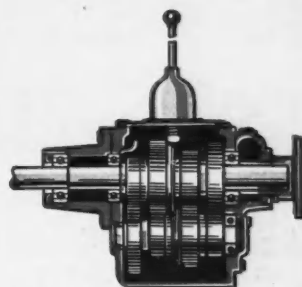
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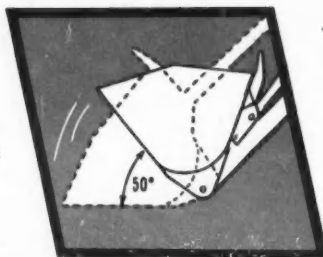


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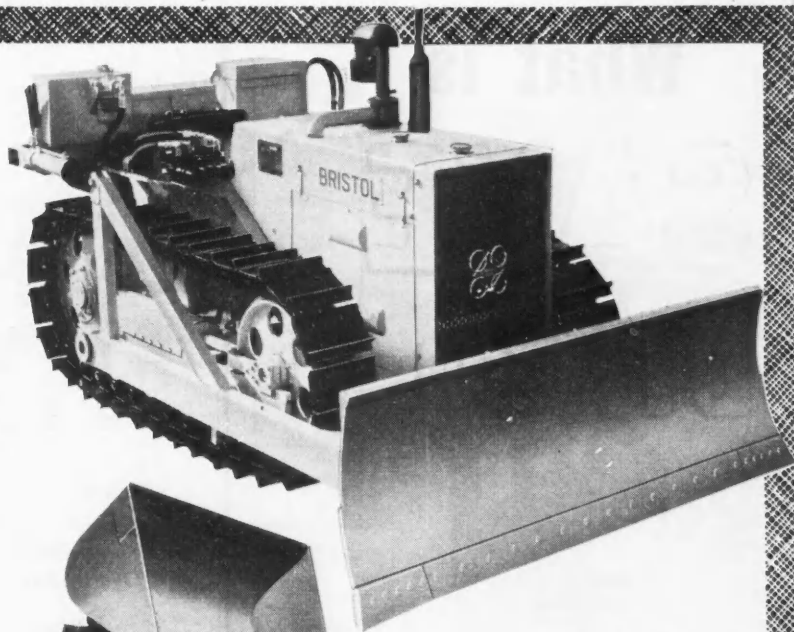


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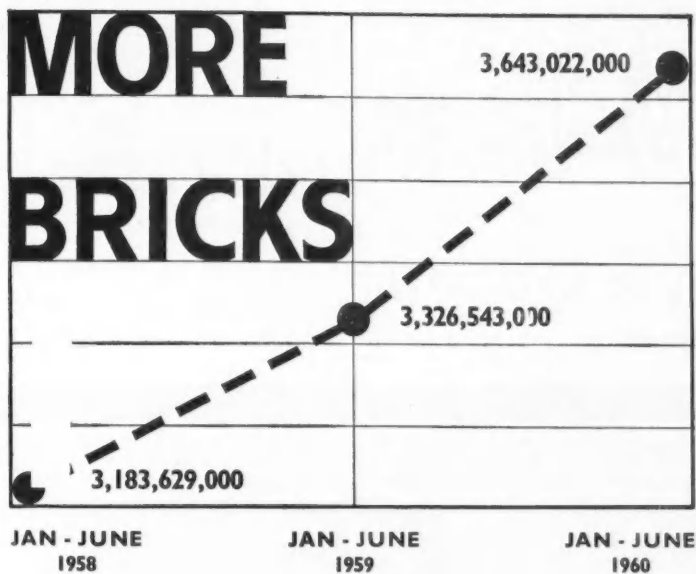
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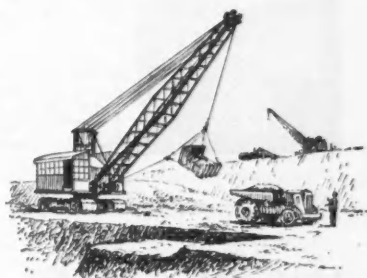
OVER 316 MILLION MORE than in the corresponding period of last year.

Capacity is being steadily expanded and when all planned developments have been completed, the Brick Industry should be able to meet all requirements.

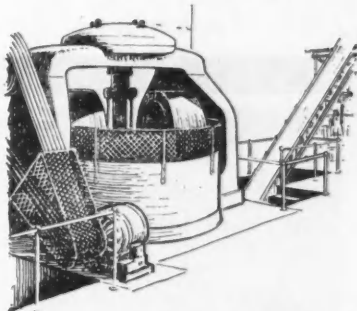
THE BRICK INDUSTRY

is forging ahead!

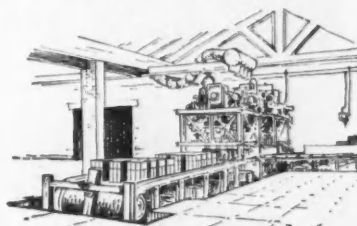
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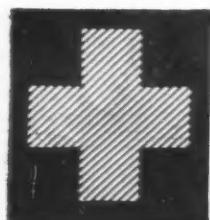
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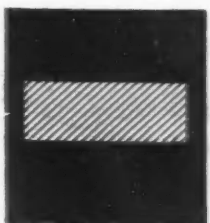
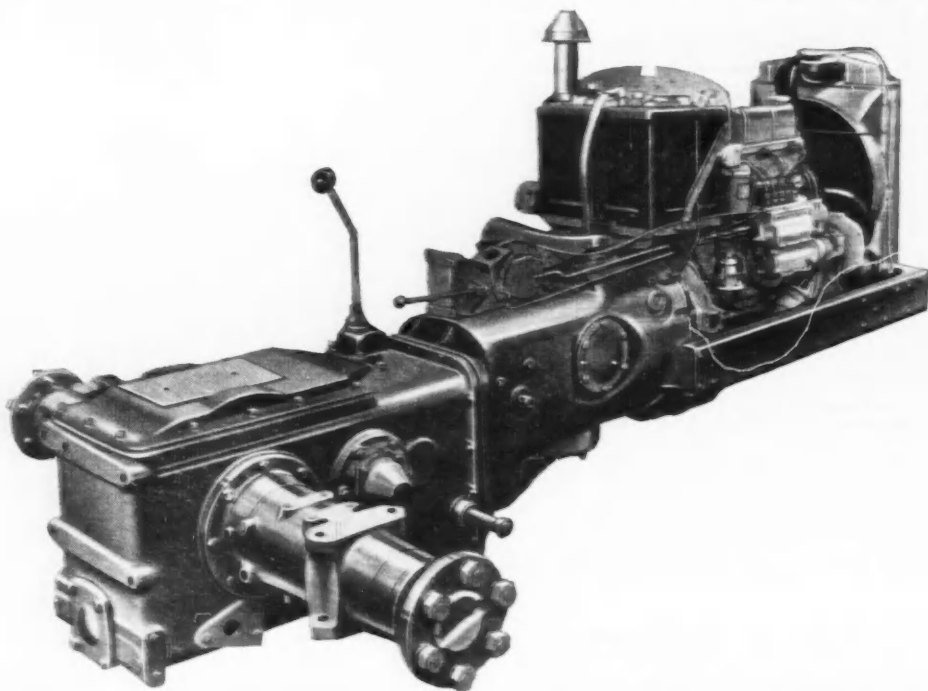
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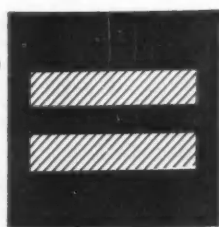
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Muir Hill Dumper

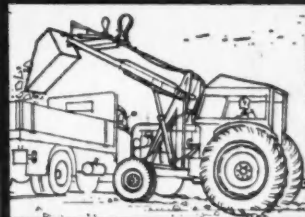
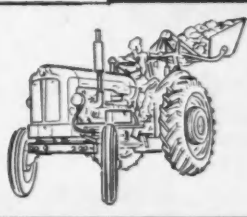
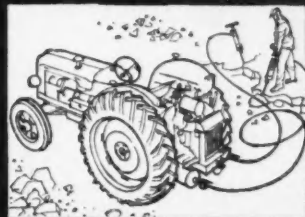
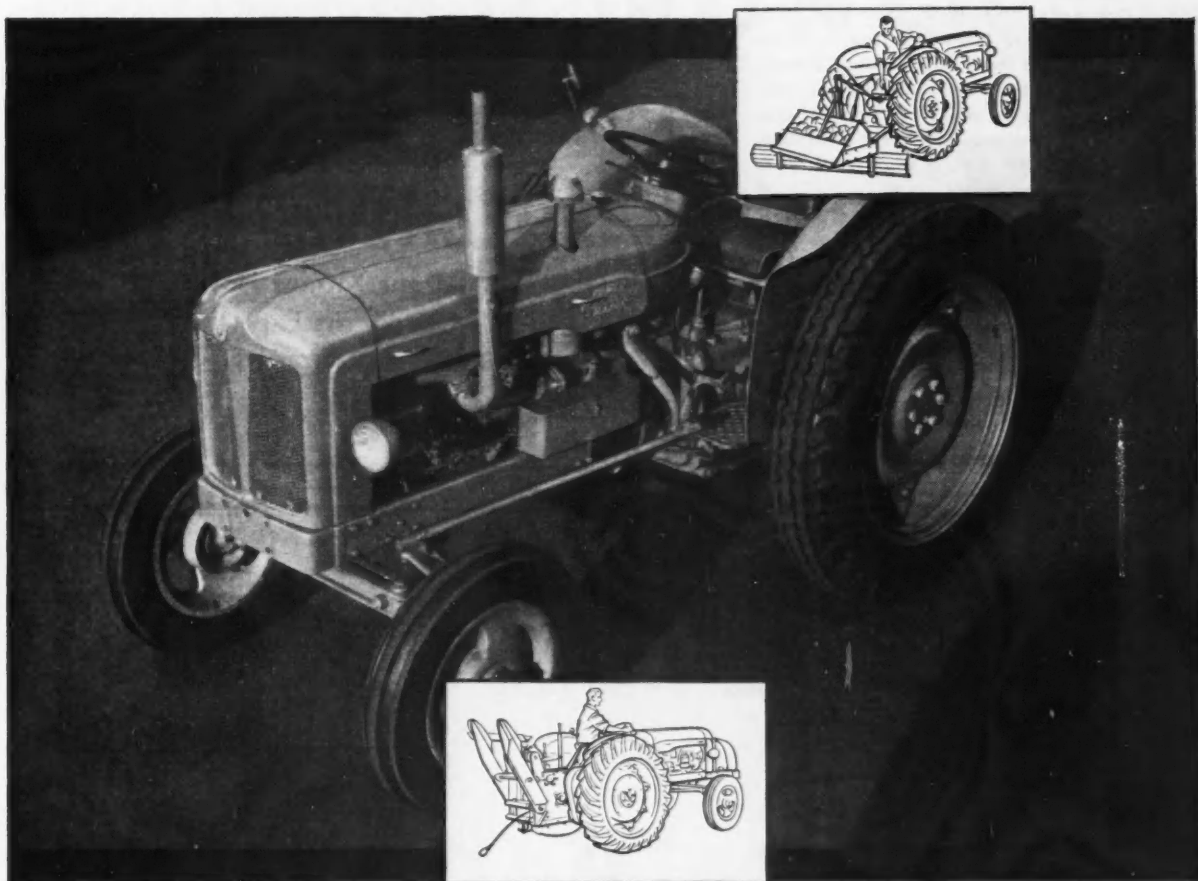
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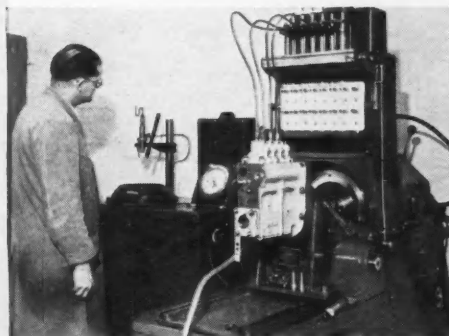
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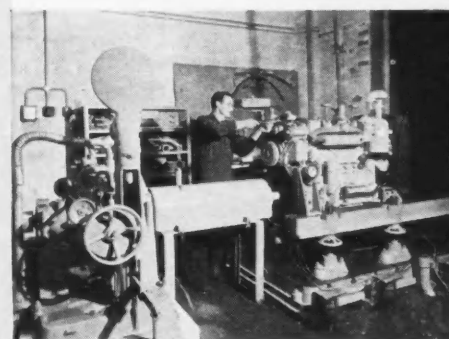
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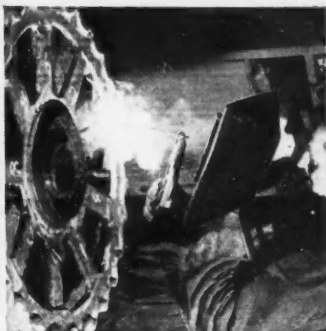
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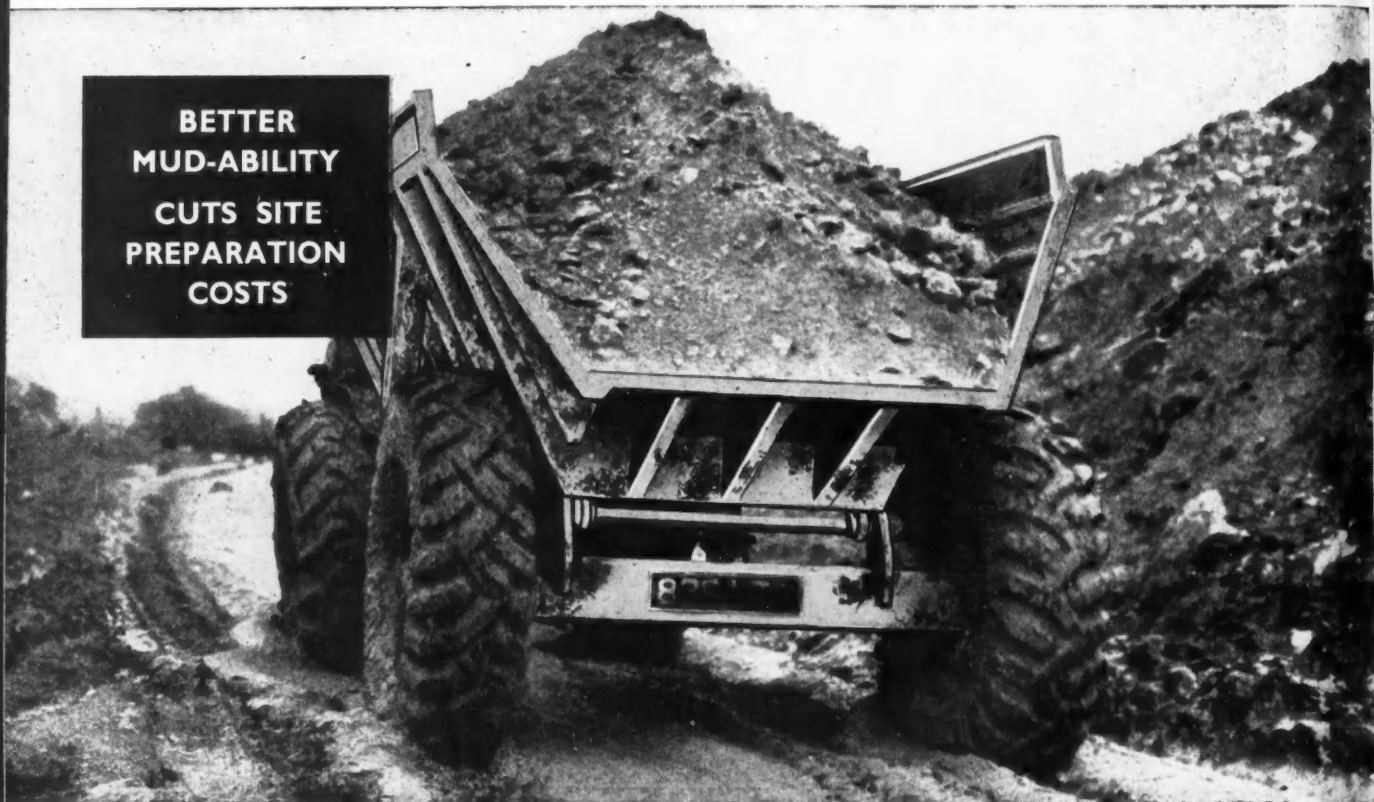


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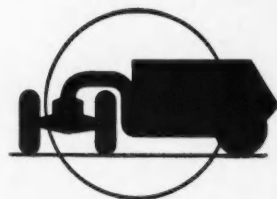
**BETTER
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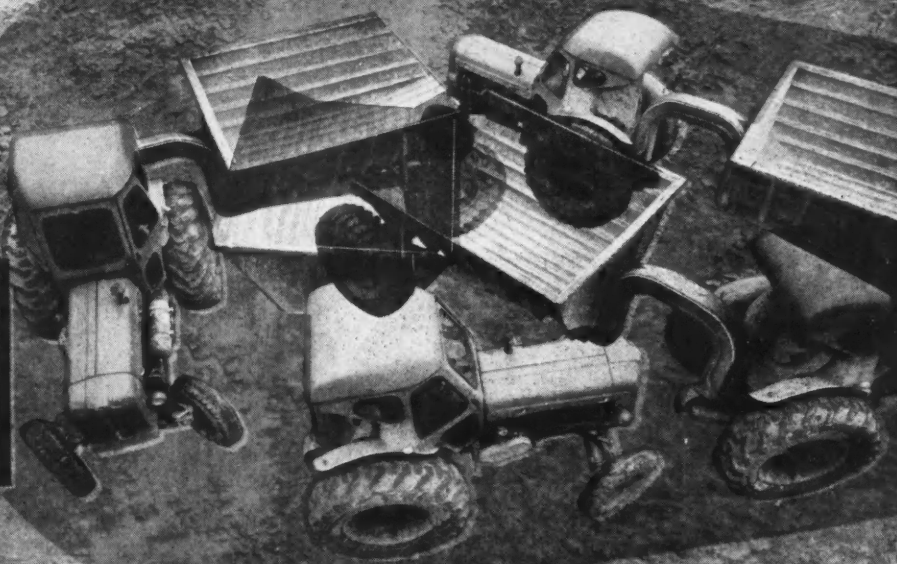
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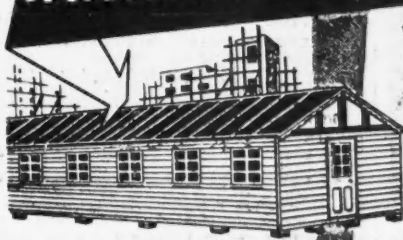
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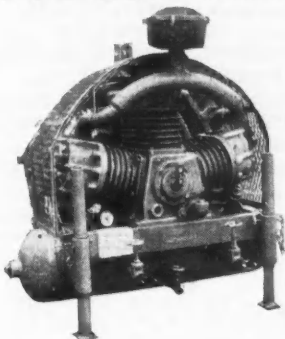
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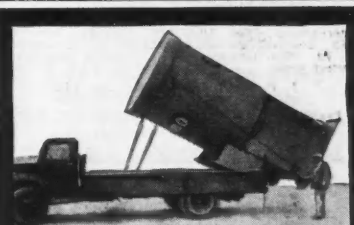
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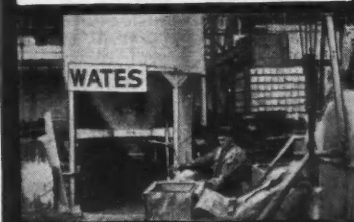
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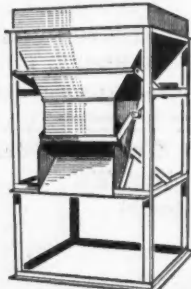
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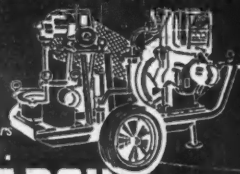
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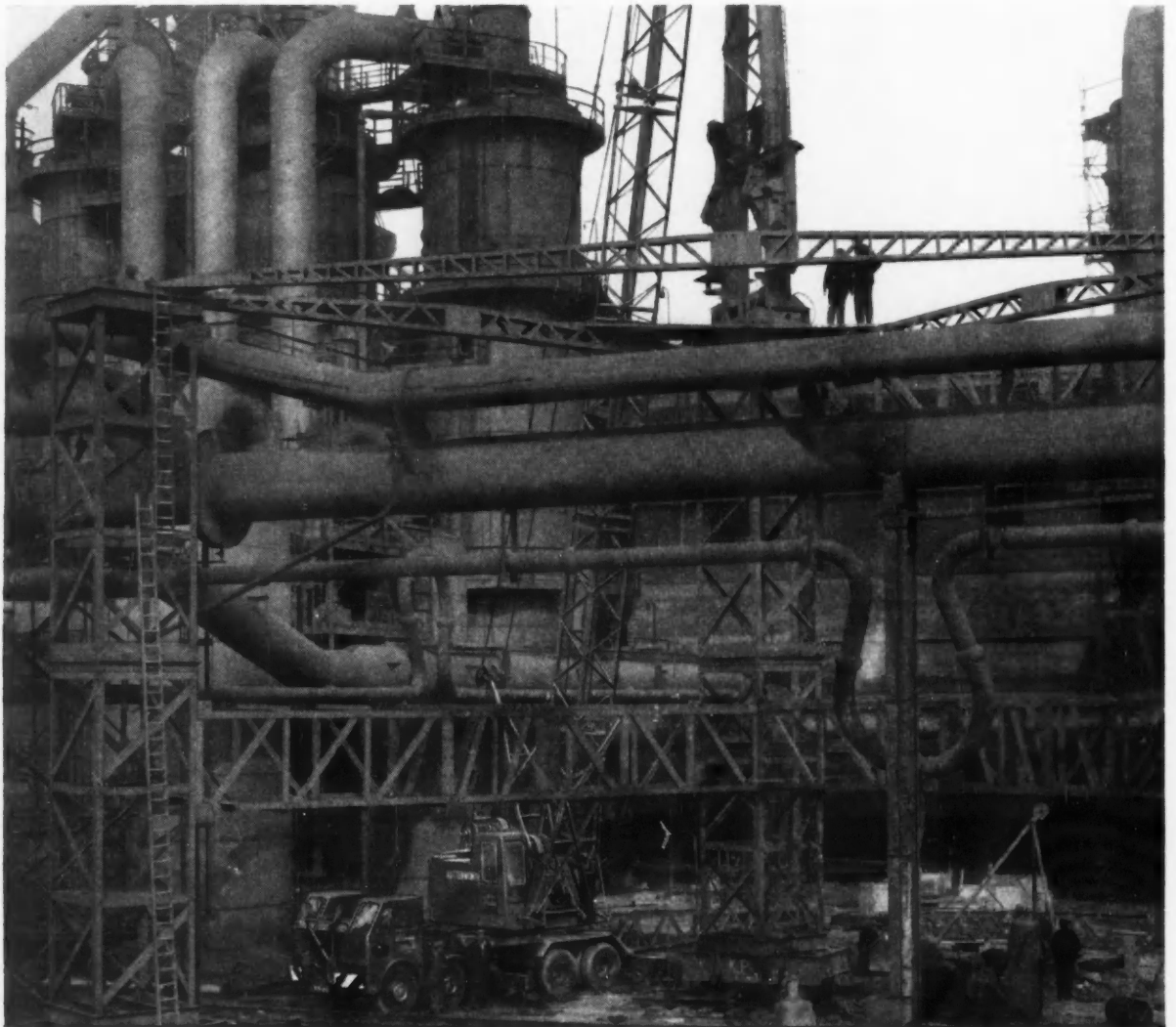
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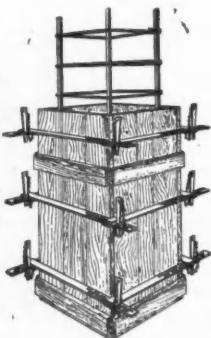
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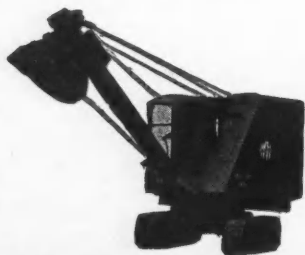
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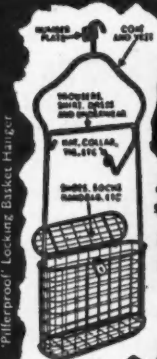


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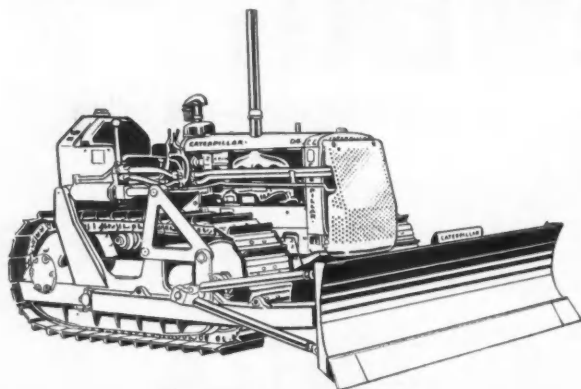


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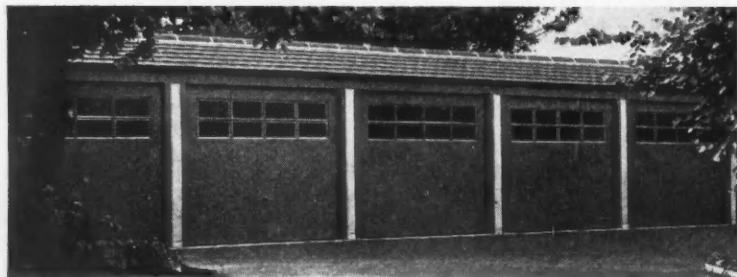


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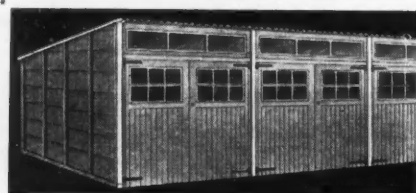
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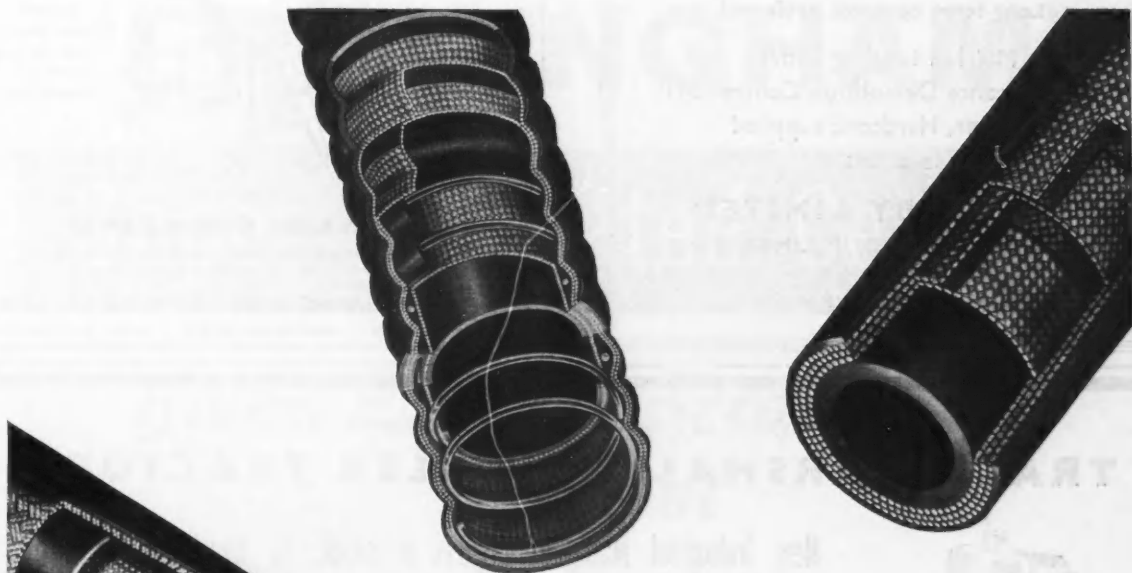
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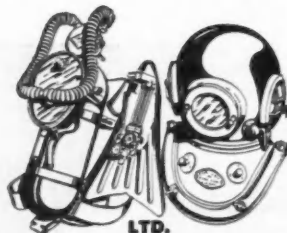
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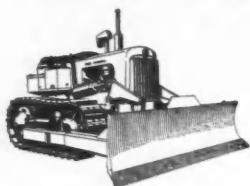
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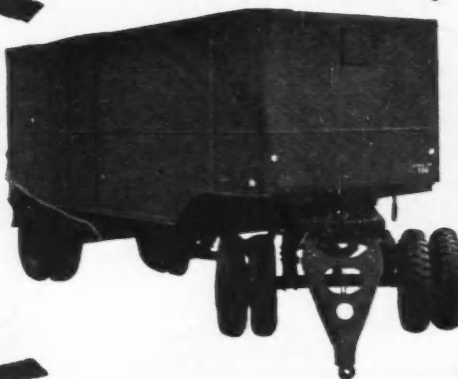
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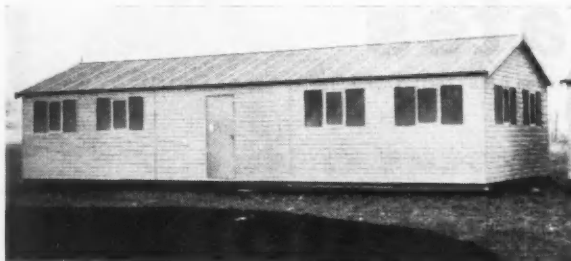
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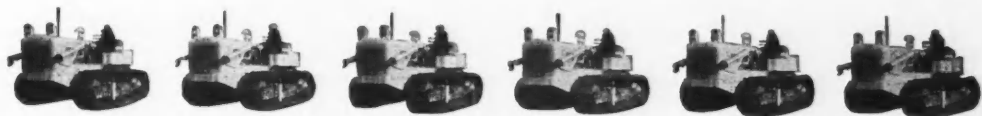


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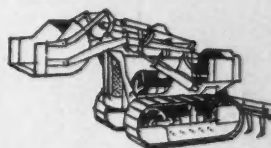
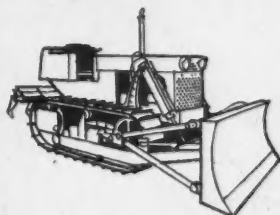
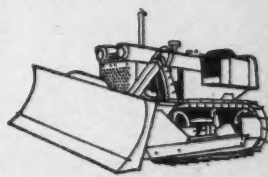
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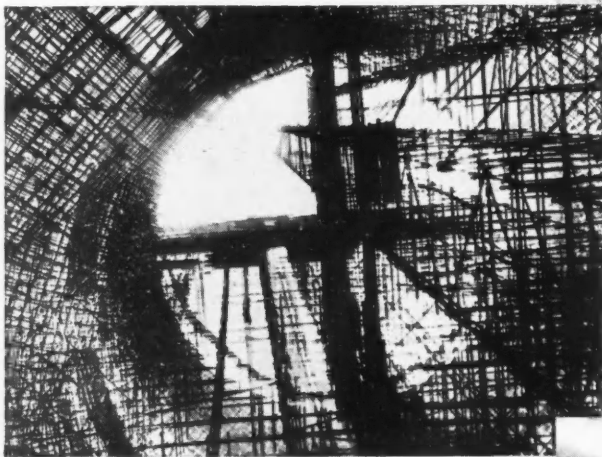
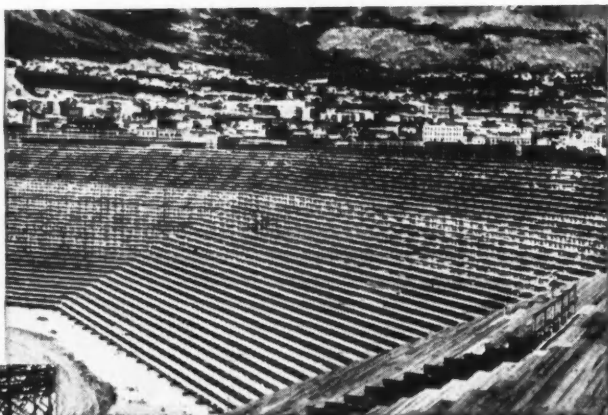
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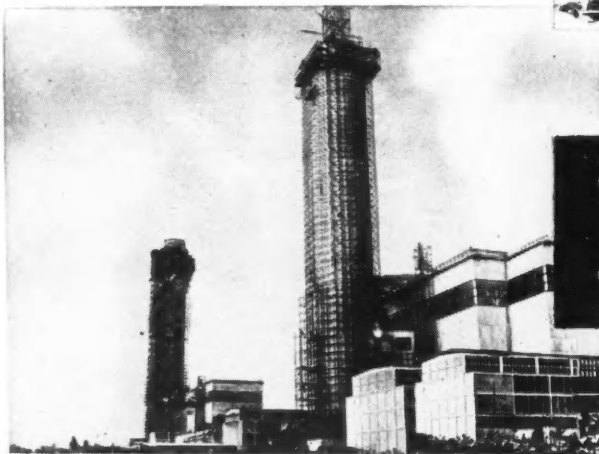
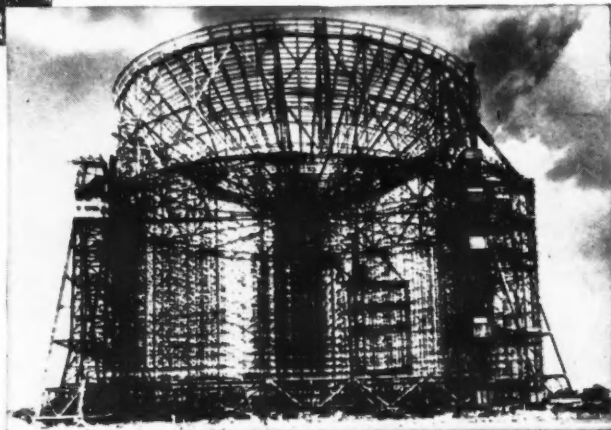


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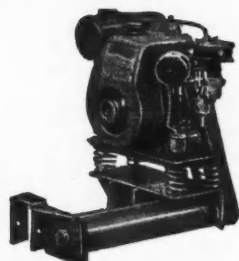
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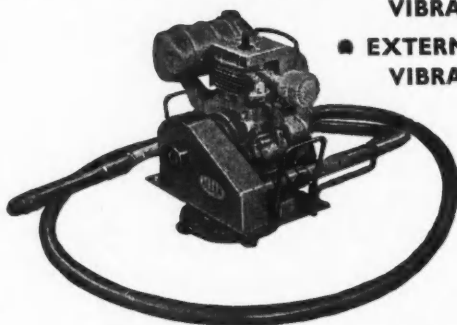
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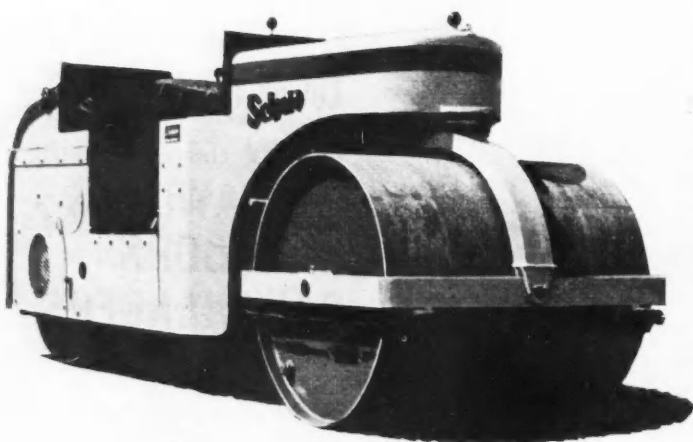


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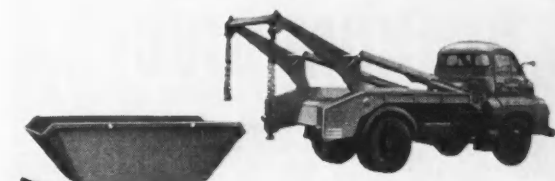
SPECIFICATION

	TYPE 20.0	TYPE 25.0
Working weight	4400 lbs.	9500 lbs.
With water ballast	5000 lbs.	11000 lbs.
Rolling width	35½"	43½"
Outside turning rad.	10'	14'
Total height	3'4"	5'1"
Total length	9'8"	12'6"
Total width	3'8"	4'7"
air cooled diesel engine electrically started		
spring adjusted scrapers vertically directed vibrations		
hydraulic steering		

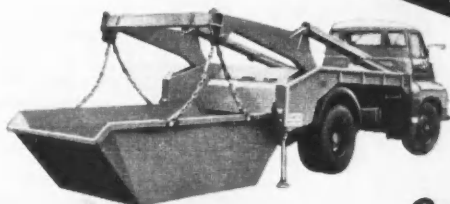
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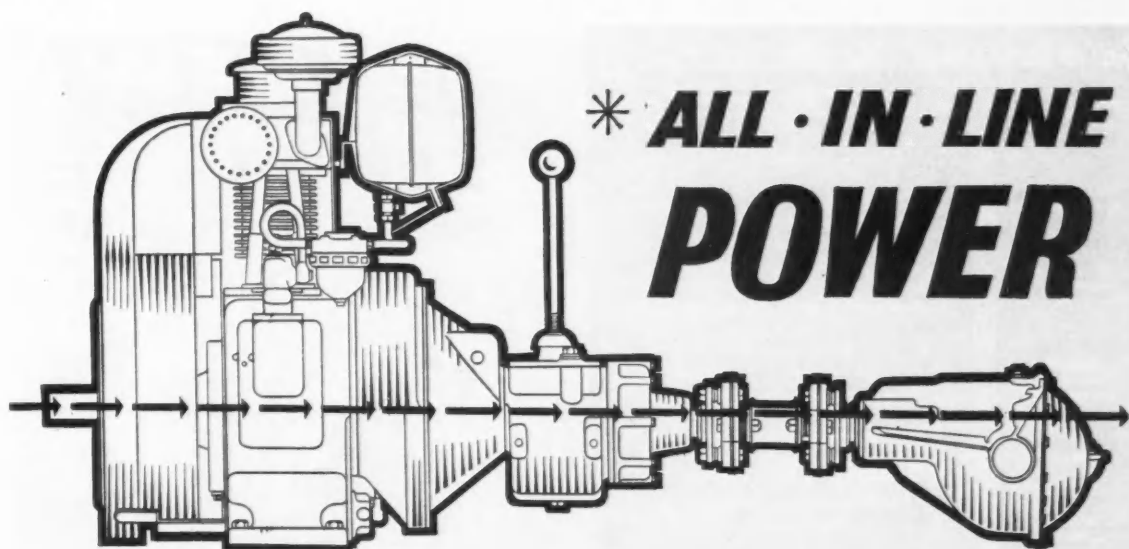
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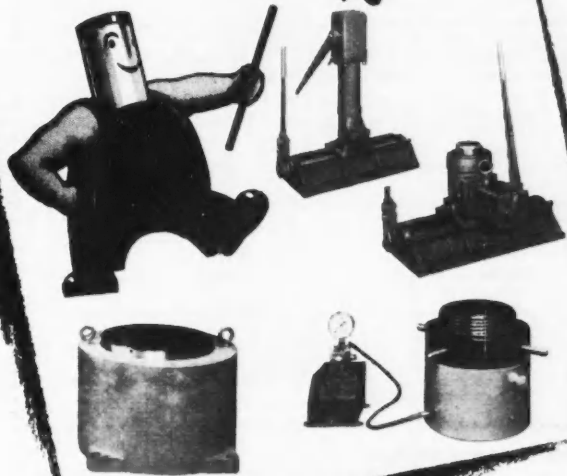


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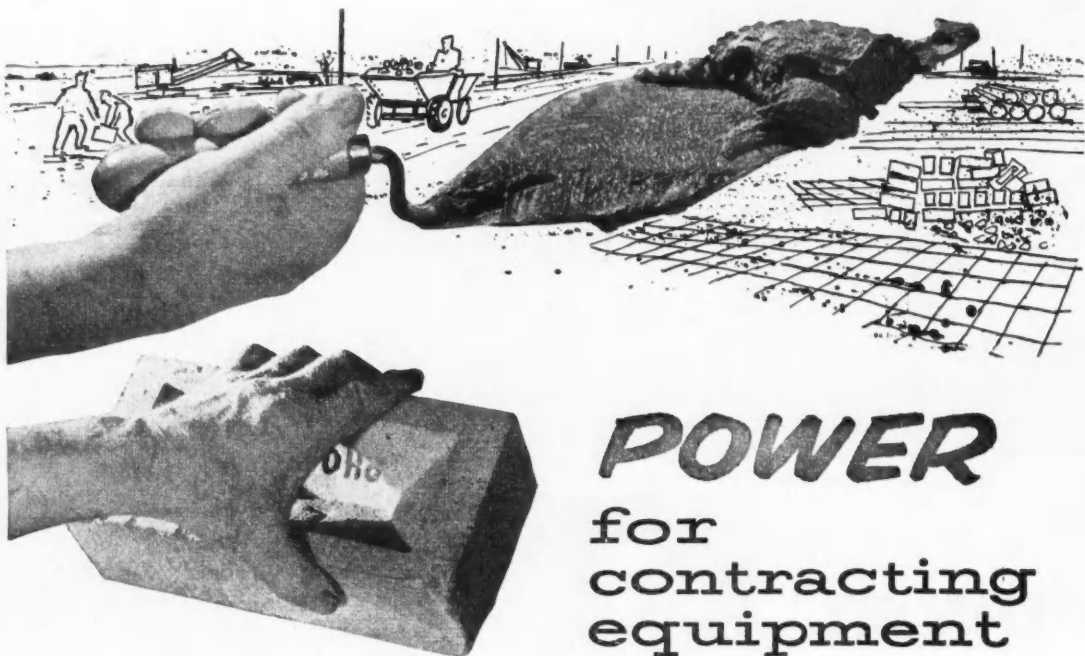
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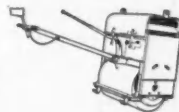
Technical Details

Mixed batch capacity=7 cu. ft. Approx. output per 8 hour day at 30 batches per hour=62 cu. yds. Water meter graduated 0-10 galls. Hand or semi-automatic operation. Discharge height=3ft. 6ins. Height of back of skip above ground level=1ft. 3in. Approx. weight of machine (with diesel engine) 35 cwts. Approx. diesel oil consumption per 8 hour day=4 gallons.

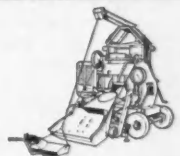
The 7T Hydraulic incorporates all the requirements of B.S.S. 1305.



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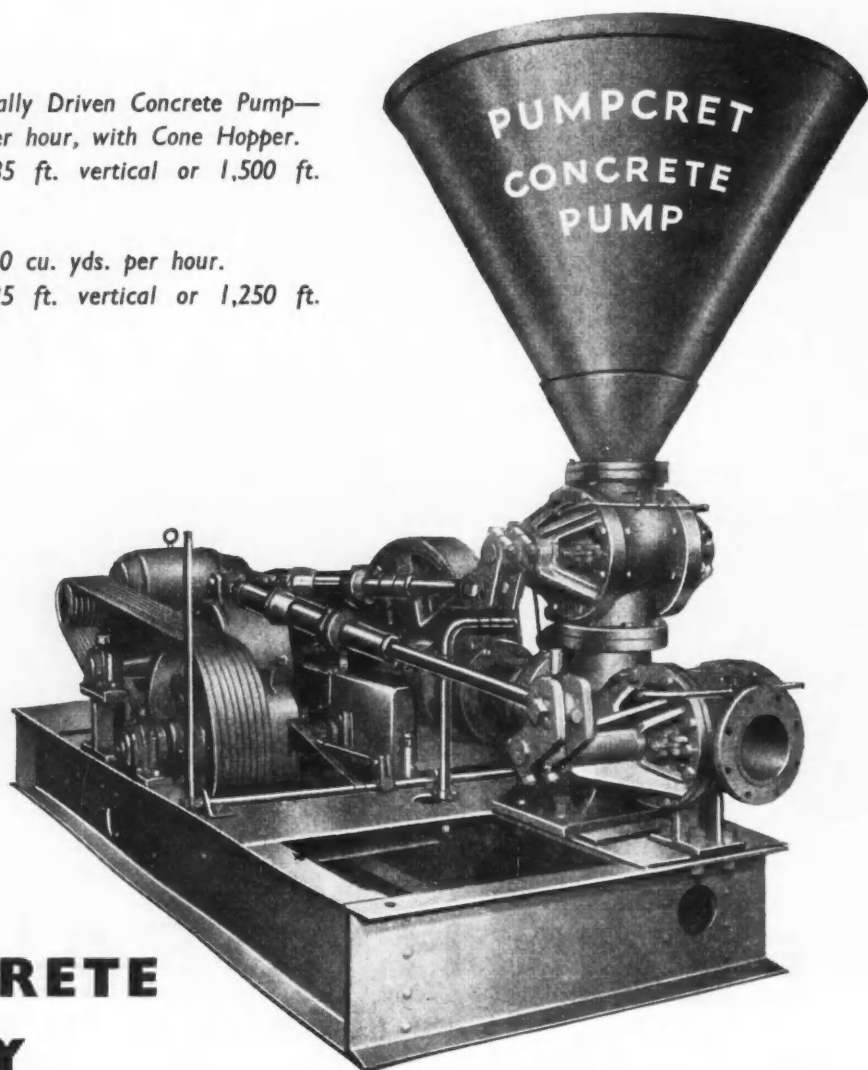


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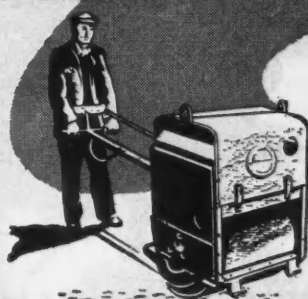
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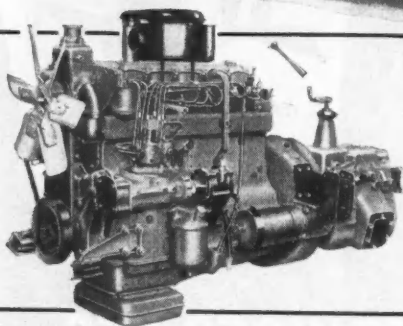
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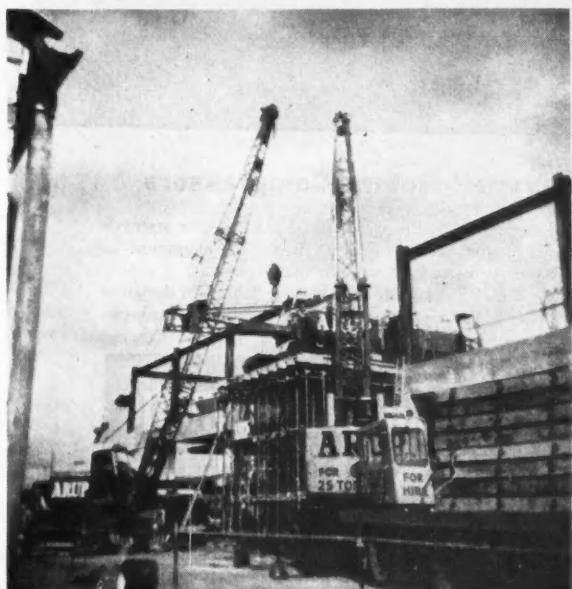
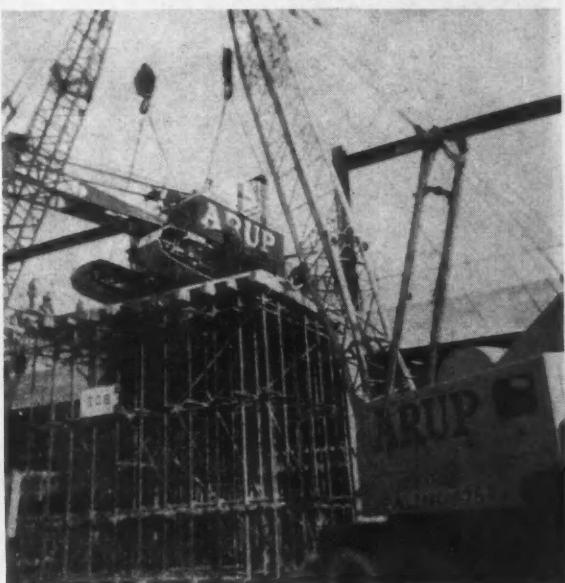
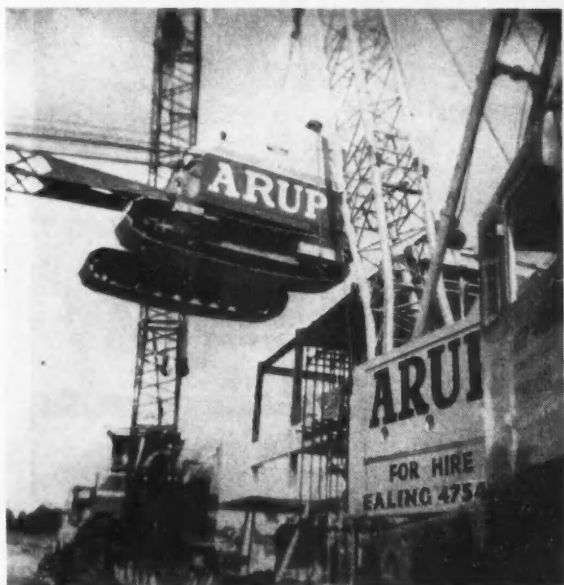


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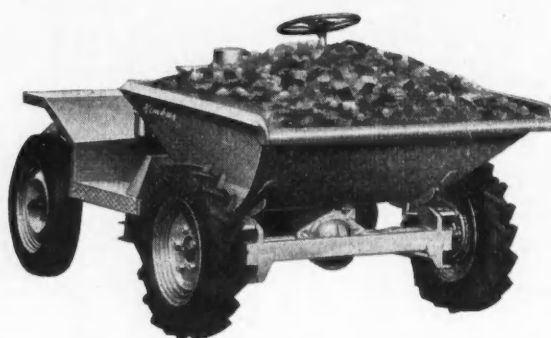
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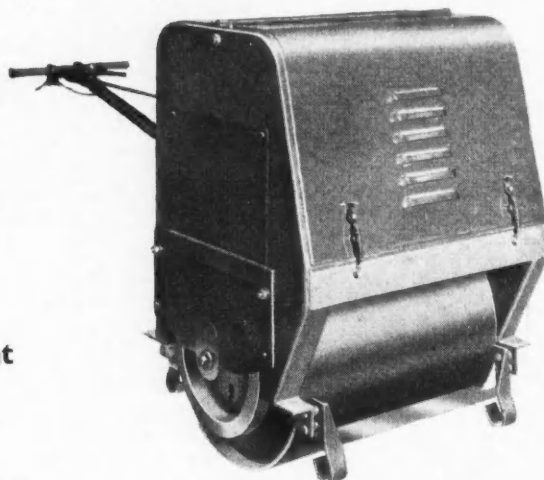
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CONTRACTOR

CONTRACTS

HOLLAND (Lincs.) COUNTY COUNCIL.**RECONSTRUCTION OF SMITH'S BRIDGE, DEEPIING ST. NICHOLAS, AND APPROACHES.**

TENDERS are invited for the DEMOLITION of the EXISTING BRIDGE, the CONSTRUCTION of a THREE-SPAN PRECAST PRESTRESSED BRIDGE on PILED FOUNDATIONS of a total span of approx. 60ft., and the REALIGNMENT APPROACHES for a total length of some 400 ft., the proposed Works being situated one mile from Littleworth Station on the Class III Road to Deeping High Bank.

Contract documents and Drawings may be obtained from the County Surveyor, upon payment of £5, returnable on submission of a bona-fide Tender. Tenders, in sealed envelopes endorsed "Tender for Smith's Bridge," must reach the undersigned not later than 12 Noon on MONDAY, 31st October, 1960. The County Council does not bind themselves to accept the lowest or any Tender.

H. A. H. WALTER,

Clerk of the County Council.
County Hall,
Boston,
Lincs.
20th September, 1960.

BOROUGH OF ERITH.**HOLLY HILL ROAD, ERITH, KENT.**

TENDERS are invited for the MAKING-UP of the ABOVE-MENTIONED ROAD, which is some 235yd. long and 36ft. wide. The Works include a 24ft. wide Hardcore and Tarmacadam Carriageway and 6ft. wide Artificial Stone Paving.

Tender documents may be obtained from, and Conditions of Contract may be inspected at, the Office of the Borough Engineer and Surveyor, Town Hall, Erith, on payment of a deposit of £2 2s. which will be refunded on receipt of a bona-fide Tender which is not subsequently withdrawn.

Tenders must be on the form provided, enclosed in a sealed envelope endorsed "Tender for Holly Hill Road," and should be delivered to the undersigned not later than 12 Noon on FRIDAY, 14th October, 1960.

The contractor must be prepared to enter into a formal contract and bond with two sureties for the due performance of the Contract.

The Council do not bind themselves to accept the lowest or any Tender.

J. A. CROMPTON,

Town Clerk.
Town Hall,
Erith, Kent.

MATLOCK URBAN DISTRICT COUNCIL.**DARLEY DALE SEWERAGE.****CONTRACT D.D.S.—PUMPING MACHINERY AND ELECTRICAL GEAR.**

TENDERS are invited, on a Fixed-price Basis, for the MANUFACTURE and COMPLETE INSTALLATION of NINE ELECTRICALLY DRIVEN SEWAGE PUMPS at Four Pumping Stations in Darley Dale. The Contract will include also the Electric Motors, Starters, Switchgear, Wiring, Steel Floorings, Stairs, Pipework, Valves, etc.

The pumping rates will be 180, 90, 90, 80, 50, 30, 20, 18 and 15 cu. ft. per minute. Tendering documents are obtainable from MESSRS. W. H. RADFORD AND SON, 57 Goldsmith Street, Nottingham, on receipt of a crossed cheque for Three Guineas, payable to the Matlock Urban District Council. Each deposit will be repaid after receipt of a bona-fide Tender.

Tenders are to be delivered to my Office by 14th DECEMBER, 1960. The Council do not bind themselves to accept the lowest or any Tender.

J. OWEN HUNT,

Solicitor and Clerk of the Council.
Matlock, Derbs.
September, 1960.

ETON RURAL DISTRICT COUNCIL.**SURFACE WATER SEWER.****LINK WAY AND SAVAY LANE, DENHAM, BUCKS.**

Civil engineering contractors wishing to be considered for inclusion in a selected list of contractors to TENDER for the CONSTRUCTION of approx. 500yd. SURFACE WATER SEWER in CONCRETE PIPES, with lengths in 15in., 27in. and 30in. diameters, respectively, are invited to apply in writing to the undersigned by not later than FRIDAY, 7th October, 1960.

A plan of the proposed surface water sewer may be seen during normal office hours at the office of the Engineer and Surveyor, Windsor Road, Slough, from whom any further information may be obtained.

G. L. BRIDGER,

Clerk to the Council.
Council Offices,
Windsor Road,
Slough,
Bucks.
20th September, 1960.

AYLESBURY RURAL DISTRICT COUNCIL.**WENDOVER SEWAGE DISPOSAL WORKS EXTENSIONS.****READVERTISED.**

The above-named Council invite TENDERS from experienced and responsible contractors for the CONSTRUCTION of EXTENSIONS to the WENDOVER SEWAGE DISPOSAL WORKS, comprising Balancing Tank, Settlement Tank, Storm Tanks, Three Bacterial Filters, Humus Tanks, Sludge Drying Beds, Sludge Pumping Station, Garage, etc., and General Site Works.

Drawings, Specifications and Bill of Quantities can be seen at the offices of the Council's Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Pelham Road, Nottingham, and copies of the Plan, Specification and Bill of Quantities can be obtained from them, on deposit of Five Guineas (by cheque payable to the Aylesbury R.D.C.), which will be refunded on receipt of a bona-fide Tender, not afterwards withdrawn and the return of all documents loaned the contractor for the purpose of making up his Tender within seven days of a notice informing him that a Tender has been accepted.

Sealed Tenders, endorsed "Wendover Sewage Works," to be delivered to the undersigned in a plain sealed envelope not later than the First Post on MONDAY, 7th November, 1960.

The lowest or any Tender will not necessarily be accepted. Copies of the Contract Drawings may be inspected at the offices of the Council's Surveyor during normal office hours by appointment.

A. EDGAR TOY,

Clerk of the Council.
Council Offices,
43 Buckingham Street,
Aylesbury,
Bucks.

CONTRACTS

WILTSHIRE COUNTY COUNCIL.**TENDERS are invited for the WIDENING and REALIGNMENT of MELKSHAM-LYNEHAM ROAD, B.3102, between Westbrook Farm and Nonsuch.**

The works comprise the Excavation for, and Construction of, New Carriageway approx. 900 lin. yd., together with Surface Water Drainage, Fencing, Hedging, etc.

Relevant documents obtainable from the County Surveyor, County Hall, Trowbridge, on payment of £2 deposit, returnable on receipt of a bona-fide Tender. Drawings may be inspected by appointment at the above address.

Tenders, in envelopes provided, bearing no name or mark indicating origin, returnable by Noon on the 29th OCTOBER, 1960.

R. P. HARRIES,

Clerk of the County Council.

BEDFORDSHIRE COUNTY COUNCIL.**LEIGHTON BUZZARD-HEMEL HEMPSTEAD ROAD, B.486.****IMPROVEMENT AT BILLINGTON HILL.**

TENDERS are invited for the WIDENING of the ABOVE ROAD over a length of 200yd.

The works consist of Excavation in Banks and Haunching to Existing Road, using Broken Stone and Lean-mix Concrete Foundation with Tarred Macadam and Asphalt Surfacing, together with Kerbing, Drainage, and Fencing Works.

Copies of the Conditions of Contract, Specification and Bills of Quantities can be obtained from the County Surveyor, Dents Road, Bedford, on payment of Two Pounds deposit, which will be refunded on receipt of a bona-fide Tender or return of the documents before the closing date.

The Drawings may be examined at the above Office by appointment, during working hours.

Tenders must be returned to the Clerk of the Council, Shire Hall, Bedford, by FRIDAY, 21st October, 1960.

The Council do not bind themselves to accept the lowest or any Tender which may be received.

GEORGE BREWIS,

Clerk of the County Council.
Shire Hall,
Bedford.

BOROUGH OF HARROGATE.**PARLIAMENT STREET IMPROVEMENT.**

TENDERS are invited for the DEMOLITION of EXISTING SHOP and CONFECTIONERY PARCELS (180ft. x 15ft. x 14ft. high approx.), together with the SUPPLY and FIXING of NEW PATENT GLAZED CANOPIES (158ft. x 10ft. x 14ft. high approx.). Specifications and Form of Tender may be obtained from the undersigned.

Tenders must be received not later than 9 a.m. on MONDAY 17th October, 1960.

The lowest or any Tender will not necessarily be accepted.

C. E. FELLOWS,

Borough Engineer.
Municipal Offices,
Harrogate.
26th September, 1960.

BOROUGH OF ROMFORD.**IMPROVEMENT TO LOWER BEDFORDS ROAD (PART).**

TENDERS are invited for the WIDENING and SURFACING of PART of LOWER BEDFORDS ROAD, comprising Paving approx. 250 lin. yd. Ditch, 750 sq. yd. Concrete Haunch, 250 lin. yd. Kerb, 200 tons Bituminous Concrete as Regulating Base Course, 1,700 sq. yd. Dense Bitumen Macadam laid 1in. thick, and 600 sq. yd. Footway Construction, together with ancillary works.

Contract documents obtainable from Borough Engineer and Surveyor, Town Hall, Romford, on deposit of cheque for £2 2s., returnable on receipt by the TOWN CLERK of a bona-fide Tender, in the envelope provided, by 17th OCTOBER, 1960.

CITY OF ROCHESTER.**MAKING-UP OF OLD PATTEENS LANE—STAGE I. (City Way to Boundary Road.)****CONSTRUCTION OF ROADS AND SEWERS.**

TENDERS are invited for the CONSTRUCTION of approx. 850 sq. yd. of HARDCORE TARMACADAM CARRIAGEWAY, Kerbing, Precast Concrete Slab Paving, 100 lin. yd. of 9in. dia. Surface Water Sewer, and ancillary works.

Drawings and General Conditions of Contract may be seen at the Office of JAMES A. PEEL, A.M.I.C.E., M.I.Mun.E., City Surveyor, 66 Maidstone Road, Rochester, during normal working hours, and from whom the Form and Conditions of Tender, Special Conditions of Contract, Specification and Bill of Quantities may be obtained on payment of a deposit of £2 2s., which will be refundable on the acceptance of a bona-fide Tender.

Tenders must be delivered to the undersigned, in the manner detailed in the above documents, not later than 12 Noon on SATURDAY, 22nd October, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

PHILIP H. BARTLETT,

Town Clerk.
Guildhall,
Rochester,
Kent.
19th September, 1960.

WEM URBAN DISTRICT COUNCIL.**HOUSING DEVELOPMENT—LOWE HILL ROAD, WEM.**

FIXED-PRICE TENDERS are invited for the ERECTION and COMPLETION at Lowe Hill, Wem, of TWO 3-STORY BLOCKS OF FLATS containing 30 Units, 18 Dwelling Houses and 12 Garages, together with Site Works comprising approx. 1,100 super. yd. of Tarmac Carriageway and Footpaths, and 2,300 super. yd. run approx. of 9in., 6in. and 4in. Sewers, etc.

Form of Tender, Bills of Quantities and Drawings may be obtained from BIGGINS AND ASSOCIATES, Chartered Architects, Richmond House, 123 Boughton, Chester, on payment of a deposit of £5 5s., which will be refunded on receipt of bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tender—Lowe Hill Road," must reach the undersigned by 28th OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

A. PEARSON,

Clerk of the Council.
Council Offices,
Wem,
Salop.

CONTRACTS

METROPOLITAN BOROUGH OF ST. MARYLEBONE.**ST JOHNS WOOD ROAD/GROVE END ROAD IMPROVEMENT.**

TENDERS are invited, on a Fixed-price Basis, for ROADWORKS at the ABOVE JUNCTION, comprising the Widening and Reconstruction of the Carriageways, and other incidental works. Total area approx. 4,000 sq. yd.

Copies of the Contract documents and Drawings may be obtained from the Council's Consulting Engineers, MESSRS. BRASSEY EDWARDS AND STOWELL, Maxwell House, Arundel Street, London, W.C.2, on receipt of a deposit of Five Guineas payable to the St. Marylebone Borough Council, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, on the form supplied and in the envelope provided, are to be delivered to the undersigned not later than 12 Noon on MONDAY, 17th October, 1960.

S. J. RUTTY,

Town Clerk.
Town Hall,
St. Marylebone, W.1.

BOROUGH OF BURY ST. EDMUNDS.**MAIN OUTFALL SEWER.**

TENDERS are invited for the EXECUTION of the ABOVE WORKS, comprising the Provision and Laying of approx. 6,000 lin. yd. of Concrete Pipes from 51in. dia. down to 21in. dia., and approx. 300 lin. yd. of 24in. dia. Concrete Tubes in heading, together with Brick Manholes, and ancillary works.

Drawings and Conditions of Contract may be seen, and the Form of Tender and Bill of Quantities obtained from the Borough Engineer and Surveyor, G. S. STANDLEY, A.M.I.C.E., M.I.Mun.E., at the address below, upon payment of a deposit of Five Guineas, which will be refunded on receipt of a bona-fide Tender and the return of all documents. Tenders, in plain sealed envelopes endorsed "Main Outfall Sewer," must be delivered to the undersigned not later than 3rd NOVEMBER next.

The Council do not bind themselves to accept the lowest or any Tender.

RICHARD R. HILES,

Town Clerk.
Borough Offices,
Bury St. Edmunds.

BOROUGH OF HESTON AND ISLEWORTH.**RECONSTRUCTION—BRIDGE ROAD DEPOT—STAGE II.**

TENDERS are invited for the ERECTION of the SECOND STAGE of a NEW WORKS DEPOT, comprising a Large Garage and Building Workshop.

Firms wishing to tender should make application to Borough Surveyor, 88 Lampton Road, Hounslow, with a deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tender Form and Bills of Quantities will be forwarded on or about 10th October, 1960.

Tenders must be received by me in the envelope provided, by 10 a.m. on FRIDAY, 4th November, 1960.

The Council are not bound to accept any Tender.

D. MATHIESON,

Town Clerk.
Town Hall,
Hounslow, Middx.

BOROUGH OF HESTON AND ISLEWORTH.**REPLANNING OF KITCHEN—CRANFORD JUNIOR SCHOOL.**

TENDERS are invited for ALTERATION WORKS to EXISTING KITCHEN at the ABOVE SCHOOL.

Firms wishing to tender should make application to the Borough Engineer and Surveyor, 88 Lampton Road, Hounslow.

Tender documents will be forwarded on or about 3rd October.

Tenders must be sealed in the envelope provided, and received by me not later than 10 a.m. on 24th OCTOBER, 1960.

D. MATHIESON,

Town Clerk.
Town Hall,
Hounslow, Middx.

BOROUGH OF ALTRINCHAM.**HIGHWAYS ACT, 1959—PART IX.****CODE OF 1892.**

TENDERS are invited for the MAKING-UP of GERRARD AVENUE (736ft.), LEICESTER AVENUE (802ft.), PRINCESS STREET (part) (235ft.), and DEANE AVENUE (246ft.), Altrincham.

Specification, Bill of Quantities and Form of Tender may be obtained from, and Drawings inspected at, the office of the Borough Surveyor, Town Hall, Altrincham, upon payment of a deposit of Two Guineas, made payable to the Borough Treasurer.

Tenders must be enclosed in the envelope provided, endorsed "Private Street Works," and delivered to the undersigned not later than 12 Noon on MONDAY, 31st October, 1960.

The Council does not bind itself to accept the lowest or any Tender.

E. GRAHAM THOMAS,

Town Clerk.
Town Hall,
Altrincham,
September, 1960.

WHITCHURCH URBAN DISTRICT COUNCIL.**STREET LIGHTING SCHEME—PHASE 1.**

TENDERS are invited for DISMANTLING EXISTING LIGHTING POINTS, SUPPLYING, DELIVERING, ERECTING, WIRING AND FITTING of 45 25ft. CONCRETE COLUMNS with 140-W Sodium Discharge Lamps; 59 15ft. CONCRETE COLUMNS with 85-W Sodium Discharge Lamps; in the Urban District of Whitchurch, in accordance with the Plan, Schedule and Specification prepared by the Council's Engineer and Surveyor, from whom Tender documents are obtainable upon receipt of a cheque for Two Guineas, being a deposit which will be returned upon receipt of a bona-fide Tender and the return of all documents.

Tenders, in plain sealed envelopes endorsed "Street Lighting," to be delivered to the Clerk of the Council not later than 12 Noon on WEDNESDAY, 26th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

FRANK CLAYTON,

Clerk of the Council.
Paul's Moss,
Dodrington,
Whitchurch,
Shropshire.

26th September, 1960.

CONTRACTS

COUNTY BOROUGH OF SOUTHAMPTON.

Southampton County Borough Council invites TENDERS for the FOLLOWING CONTRACTS on Bills of Quantities available early in October:

CONTRACT B.356—95 Traditional Houses—Thornhill Estate.
CONTRACT B.354—4 Traditional Houses—Gover Road, Millbrook.
CONTRACT B.357—140 Flats in Traditional Construction in Seven 5-storey Blocks, Types A.5 and B.5. Thornhill Estate.
Applications for Tenders should be received by the BOROUGH ENGINEER, Civic Centre, Southampton, not later than 10 a.m. on MONDAY, 10th October, 1960.

BOROUGH OF BRIDGWATER.

CONSTRUCTION OF FOOTPATHS AND COMPLETION OF CARRIAGEWAY.

WESTOVER GREEN.

TENDERS are invited for the CONSTRUCTION of approx. 450 sq. yd. of TARMACADAM FOOTPATH, the LAYING of 205 lin. yd. of CONCRETE BACK EDGING, and the TARMACADAM SURFACING of 900 sq. yd. of CARRIAGEWAY.

Full particulars and documents may be obtained from the Borough Surveyor, Town Hall, Bridgwater, on payment of £2.2s. deposit.

Closing date for receipt of Tenders—10 a.m., SATURDAY, 15th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. A. CLIDERO, Town Clerk.

Town Hall,
Bridgwater.

BRIDGNORTH RURAL DISTRICT COUNCIL.

HIGHLEY SEWERAGE AND SEWAGE DISPOSAL.

CONTRACT NO. 3.

TENDERS are invited for the CONSTRUCTION of about 1,550 lin. yd. of SPUN-IRON AND GLAZED STONEWARE PIPE SEWERS, 6in. and 12in. in diameter, with Manholes, and EXTENSION of the SEWAGE DISPOSAL WORKS, comprising an additional Sludge Lagoon; also the Extension of the Road on Highley Estate, and Incidental Works. In accordance with the Drawings and Specifications, Bills of Quantities prepared by the Engineers, MESSRS. A. H. S. WATERS AND PARTNERS, of 25 Temple Row, Birmingham, 2.

The Drawings may be seen at, and the General Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from the offices of the undersigned, or of the Engineers, on or after the 20th October, 1960, on payment of a deposit of Five Guineas, which will be refunded upon receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, on the form supplied and in the endorsed envelope provided, are to be delivered to me at my office not later than Noon on the 18th NOVEMBER, 1960.

The Council does not undertake to accept the lowest or any Tender.

G. C. HARRIS, Clerk of the Council.

Westgate,
Bridgnorth.

AMERSHAM RURAL DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

CARAVAN SITE—WHELPLEY HILL.

In connection with the provision of services and amenities at the ABOVE CARAVAN SITE, the Council invite TENDERS for the FOLLOWING:

CONTRACT No. 1.—The Construction of Hardcore Roads, Paths and Hardstandings for 76 Caravans, the Providing and Laying 2,500 yd. of Polythene Water Services, the Laying of 4in. and 6in. Pitch Fibre Drainage Pipes, and the Provision and Erection of Chain link and Palisade Fencing, together with ancillary works. The Construction of an Underground Sewage Disposal Works to serve the site is also included.

CONTRACT No. 2.—The Construction of an Ablution and Laundry Block, Bottle Gas Store, and the Erection of a Prefabricated Shop and Prefabricated Warden's Bungalow.

Plans, Bills of Quantities, Specifications, etc., may be obtained from Mr. J. GODBEHERE, A.M.I.Mun.E., Engineer and Surveyor, Amersham Rural District Council, 42 High Street, Amersham, on payment of £2.2s. for each set of documents, which will be returned on receipt of a bona-fide Tender. Contractors should intimate which contract they are interested in, or if interested in both.

Tenders will be required to be submitted on the form supplied by the Council, and in the envelope provided, endorsed "Caravan Site—Whepley Hill—Contract No. 1 or 2," as the case may be, and be received not later than First Post on FRIDAY, October 21st, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. E. BUXTON, Clerk to the Council.

42 High Street,
Amersham, Bucks.

AMERSHAM RURAL DISTRICT COUNCIL.

ENGINEER AND SURVEYOR'S DEPARTMENT.

REMEDIAL ROADWORKS AT SIBLEYS RISE, SOUTH HEATH AND SNOWHILL COTTAGES, ASHLEY GREEN.

TENDERS are invited for the ABOVE REMEDIAL ROADWORKS, comprising Breaking-out and Re-laying Damaged Kerbs, the Patching and Resurfacing of the Carriageway and Footpaths with Cold Asphalt, together with the Provision of additional Surface Water Drainage. The area comprises approx. 1,500 sq. yd. at South Heath and approx. 500 yd. at Snowhill Cottages.

The appropriate documents may be obtained from Mr. J. GODBEHERE, A.M.I.Mun.E., Engineer and Surveyor, Amersham Rural District Council, 42 High Street, Amersham, Bucks., on payment of £1, which will be returned on receipt of a bona-fide Tender.

Tenders must be submitted on the form supplied by the Council, and in the envelope provided, endorsed "Remedial Roadworks—S.H. and A.G.," and be received by the undersigned not later than First Post on 28th OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. E. BUXTON, Clerk to the Council.

Council Offices,
42 High Street,
Amersham, Bucks.

CONTRACTS

BEDFORDSHIRE COUNTY COUNCIL.

C.198, SUNDON ROAD, HOUGHTON REGIS—IMPROVEMENT FRONTING L.C.C. ESTATE.

TENDERS are invited for the ABOVE WORKS, which consist of Site Clearance, Laying of approx. 720 lin. yd. of 6in. and 12in. Stoneware Pipes, together with Manholes, and the Construction of approx. 2,000 super. yd. of Tarmacadam Footpaths. Drawings and Standard Conditions of Contract may be inspected at the Office of the County Surveyor, Dents Road, Bedford, during normal office hours, from whom copies of the Specification, Bills of Quantities and Form of Tender may be obtained on payment of a deposit of Two Guineas, which will be returned only on receipt of a bona-fide Tender and the return of all documents.

Tenders, in the envelope provided, must be delivered to the undersigned not later than FRIDAY, 21st October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

GEORGE BREWIS, Clerk of the County Council.

Shire Hall,
Bedford.

BEDFORDSHIRE COUNTY COUNCIL.

LONDON TO HOLYHEAD TRUNK ROAD, A.5.

IMPROVEMENT AT JUNCTION WITH C.193 (TEBWORTH TURN).

TENDERS are invited for the REPLACING of a CONCRETE ROAD by a NEW FLEXIBLE PAVEMENT at the ABOVE SITE.

The works consist of Scarifying the Existing Tarmac on the Old Concrete Bays; the Taking-out of the Bays; Excavating for an average depth of 6in. under the Bays, and Replacing this New Depth with a Road of Flexible Construction.

The length of road to be improved is 140 yd., the width being 30ft.

Copies of the Conditions of Contract, Specification and Bill of Quantities can be obtained from the County Surveyor, Dents Road, Bedford, on payment of Two Pounds deposit, which will be refunded on receipt of a bona-fide Tender or return of the documents before the closing date.

The Drawings may be examined at the above Office by appointment, during working hours.

Tenders must be returned to the CLERK OF THE COUNCIL, Shire Hall, Bedford, by FRIDAY, 21st October, 1960.

The Council do not bind themselves to accept the lowest or any Tender which may be received.

GEORGE BREWIS, Clerk of the County Council.

Shire Hall,
Bedford.

CITY OF STOKE-ON-TRENT.

HIGHWAYS ACT, 1959.

MAKING-UP OF PRIVATE STREETS:
(a) SEVERN STREET, COBRIDGE—CONTRACT NO. 905.

EDGWARE STREET, COBRIDGE—CONTRACT NO. 904.

WINDERMERE STREET (PART), COBRIDGE—CONTRACT NO. 905.

(b) SERVICE ROAD, OFF MALTHOUSE ROAD, BUCKNALL—CONTRACT NO. 616.

STUART AVENUE, TRENTHAM—CONTRACT NO. 919.

TIDESWELL ROAD, LONGTON—CONTRACT NO. 926.

The CORPORATION invite TENDERS for the MAKING-UP of the ABOVE STREETS.

Drawings and Conditions of Contract may be seen and Bills of Quantities and Specifications obtained from the City Surveyor's Department, Town Hall, Stoke-on-Trent, on payment of £2 each in respect of (a) and (b), which will be returned on receipt of a bona-fide Tender.

Tenders must be delivered to the Town Clerk, Town Hall, Stoke-on-Trent, in the separate envelopes provided, not later than 12 Noon on WEDNESDAY, 12th October, 1960.

HARRY TAYLOR, Town Clerk.

CITY OF NEW SARUM.

STRATFORD ROAD, SALISBURY.

TENDERS are invited for the CONSTRUCTION of 10 HOUSES and Four FLATS, together with Out-buildings, Pavings, Drainage and all ancillary works at STRATFORD ROAD, SALISBURY.

Tenders are to be on a fixed-price basis and on Bills of Quantities, which will be available on SATURDAY, 8th October, 1960. Copies of the Bills of Quantities and Form of Tender can be obtained from the City Engineer, The Council House, Bourne Hill, Salisbury.

Tenders, in plain sealed envelopes, must be delivered to the undersigned not later than Noon on TUESDAY, 1st November, 1960.

GEORGE RICHARDSON, Town Clerk.

CHISLEHURST AND SIDCUP URBAN DISTRICT COUNCIL.

NORTH CRAY PLACE ESTATE—ROADS AND SEWERS.

Names and addresses of contractors desirous of TENDERING for the CONSTRUCTION of 6,000 sq. yd. of CONCRETE ROADS and 1,650 lin. yd. of 18in., 15in., 9in. and 6in. SEWERS, to ENGINEER AND SURVEYOR, Manor House, Sidcup, Kent, with Two Guineas deposit, by 12th OCTOBER, 1960.

HAVERFORDWEST RURAL DISTRICT COUNCIL.

MILLIN WATER EXTENSION.

TENDERS are invited from competent civil engineering contractors for CARRYING OUT the ABOVE SCHEME, which comprises approx. 3,000 yd. of 1½in. Asbestos Pressure Pipe with Valves, Fittings, Service Connections and appurtenant Works. Millin is approx. four miles east of Haverfordwest.

Specification and Bills of Quantities may be obtained from the Council's Engineer and Surveyor, 8-10 Picton Place, Haverfordwest. No deposit is required, but tenderers are expected to return all documents, and the Council reserves the right to charge for documents not returned.

Tenders, endorsed "Millin Water," should be received by me not later than 31st OCTOBER, 1960.

The Council does not undertake to accept the lowest or any Tender, and acceptance is subject to the approval of Welsh Office, Ministry of Housing and Local Government.

HENRY J. DICKMAN, Clerk of the Council.

24th September, 1960.

CONTRACTS

BOROUGH OF ELLESMERE PORT.

CONTRACT NO. 298.

34 GROUP "A" ELECTRIC STREET LAMPS—CHESTER/BIRKENHEAD TRUNK ROAD, A.41.

REVISED.

TENDERS are invited for the PROVISION and ERECTION of 34 CONCRETE GROUP "A" ELECTRIC STREET LAMPS complete on the ABOVE ROAD.

Contract documents obtainable from the Borough Engineer and Surveyor, Queen Street, Ellesmere Port, on the 8th October, 1960.

Sealed Tenders, in the plain official envelope provided, must reach the undersigned by Post by not later than 5 p.m. on MONDAY, the 24th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. J. BERNIE, Town Clerk.

Municipal Offices,
Ellesmere Port,
Cheshire.

CITY AND COUNTY OF BRISTOL.

TENDERS invited for SUPPLY of UNDERMENTIONED MATERIALS during the 12 months 1st January, 1961, to 31st December, 1961:—

Electric Lamps, Transformers and Capacitors, Electrical Sundries, Electric Cables, Cement, Mortar, Plasters, Bricks, Tiles and Salt Glazed Ware.

Forms of Tender, Specifications and Conditions from CITY ENGINEER AND PLANNING OFFICER, Cabot House, Deanery Road, Bristol, 1. Tenders returnable by 21st OCTOBER. Lowest or any Tender not necessarily accepted.

CITY OF BATH.

NEWBRIIDGE IMPROVEMENT.

TENDERS are invited for the REALIGNMENT of the APPROACH ROAD to the NEW BRIDGE, Bath. The works include the Erection of Concrete Retaining Walls; Extension of Cattle Arches; approx. 1,000 cu. yd. of Fill, and the Construction of 1,620 sq. yd. of Carriageway.

Plans may be inspected at, and copies of the General Conditions of Contract, Specification, Bill of Quantities and Form of Tender may be obtained from, the City Engineer and Surveyor, City Engineer's Office, Guildhall, Bath, on payment of a deposit of Two Guineas, which will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders must be delivered, in the envelope provided, not later than 10 a.m., SATURDAY, 15th October, 1960, to the Town Clerk, Guildhall, Bath.

The Corporation do not bind themselves to accept the lowest or any Tender.

JARED E. DIXON, Town Clerk.

Guildhall,
Bath.

28th September, 1960.

PERSHORE RURAL DISTRICT COUNCIL.

REGIONAL SEWERAGE AND SEWAGE DISPOSAL.

CONTRACT NO. 1.

TENDERS, on a FIXED-PRICE BASIS, are invited from experienced public works contractors for the CONSTRUCTION of approx. 360 lin. yd. of 9in. and 6in. diameter IRON SEWERS, 12½ miles of 21in. to 9in. diameter CONCRETE, and 6in. diameter GLAZED STONEWARE PIPE, together with Concrete Tube Manholes, Five Sewage Pumping Stations, approx. three miles, 12in. and 4in. diameter Iron and Steel Riser Pipes, 12in. and 4in. Sewage Disposal Works, comprising Detritus Tanks, Settling Tanks, Bacterial Filters, Humus Tanks, Sludge Drying Beds, Sludge Pumping Station, and other incidental Works.

The Specification, Bills of Quantities and Form of Tender may be obtained from the Council's Consulting Engineers, MESSRS. WILLCOX, RAIKES AND MARSHALL, 33 Great Charles Street, Birmingham, 3, where the Drawings may be inspected on or after 19th October, 1960, upon payment of a deposit of £15 15s. (cheque only, made payable to the Council), which will be refunded on receipt of a bona-fide Tender supported by Priced Bills of Quantities, if requested, and the return of all documents.

Particulars and Specification may be provided, should be delivered to the undersigned not later than 12 Noon on MONDAY, 5th December, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. G. TRAPP, Clerk of the Council.

Rural District Council Offices,
Perschore,
Worcs.

28th September, 1960.

AYLESBURY RURAL DISTRICT COUNCIL.

MAIN DRAINAGE OF HARDWICK AND WEEDON.

A20/1 CONTRACT 1.

READVERTISED.

TO CIVIL ENGINEERING AND PUBLIC WORKS CONTRACTORS.

The Aylesbury Rural District Council invites TENDERS from experienced contractors for the CONSTRUCTION of approx. Three Miles of SMALL DIAMETER SEWERS, A SEWAGE PUMPING STATION, the CONSTRUCTION of A SEWAGE DISPOSAL WORKS, and other ancillary works.

Plans may be inspected, at the Offices of the Consulting Engineers, MESSRS. HOWARD HUMPHREYS AND SONS, West Street, Epsom, on and from Monday, 3rd October, 1960, until Friday, 21st October, 1960, between the hours of 10 a.m. and 4 p.m., upon payment of a deposit of Three Guineas by cheque made payable to the Aylesbury Rural District Council, which deposit, after the Council has reached a decision, will be returned to each contractor who has submitted a bona-fide Tender which has not subsequently been withdrawn.

Tenders are to be on the official form and are to be delivered to the undersigned, in sealed envelopes endorsed "Tender for the Main Drainage of Hardwick and Weedon," but bearing no name or other mark indicating the sender, not later than Noon on MONDAY, 7th November, 1960.

The Council does not undertake to accept the lowest or any Tender.

A. EDGAR TOY, Clerk of the Council.

Council Offices,
43 Buckingham Street,
Aylesbury,
September, 1960.

CONTRACTS

BOROUGH OF CHORLEY.
DEMOLITION WORKS.

TENDERS are invited for the DEMOLITION of approx. 21 PROPERTIES in ELDON STREET and ELLIOTT STREET.

Applications for the Tender documents should be made to the Borough Engineer, Town Hall, Chorley, accompanied by a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn. Conditions of Contract and Drawings may be inspected during normal office hours.

Tenders, suitably endorsed, should be returned to the undersigned not later than the 21st OCTOBER, 1960.

ROBERT POTTER,
Town Clerk.

Town Hall,
Chorley.
27th September, 1960.

BOROUGH OF WESTON-SUPER-MARE.
BYRON ROAD RECREATION GROUND.

FIXED-PRICE TENDERS are invited from contractors experienced in similar works for the CONSTRUCTION of a RECREATION GROUND of approx. 2.4 acres. The Works include Drainage, Levelling, Cultivating, Seeding, and other ancillary items.

The Specification, Bill of Quantities and Form of Tender may be obtained and the Drawings and General Conditions of Contract examined at the office of the Borough Engineer, on payment of a deposit of £2 2s., returnable on the receipt of a bona-fide Tender.

Tenders, sealed in the envelope provided, must be delivered to the undersigned not later than 9.30 a.m. on FRIDAY, 28th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. G. LICKFOLD,
Town Clerk.

Town Hall,
Weston-super-Mare.
October, 1960.

HAVANT AND WATERLOO URBAN DISTRICT COUNCIL.

TENDERS are invited for the ERECTION of 12 FLATS in TWO BLOCKS of THREE STOREYS and ONE DETACHED BUNGALOW, all in traditional construction, together with Drainage and External Works, at FAIRFIELD ROAD, Havant.

Conditions of Contract may be inspected at the offices of the Engineer and Surveyor, 1 Park Road North, Havant, from whom Forms of Tender and Bills of Quantities may be obtained.

No Tender will be received except in a plain sealed envelope, which must bear the word "Tender," followed by the subject to which it relates, but shall not bear any name or mark indicating the sender.

Tenders must be delivered not later than Noon on MONDAY, 17th October, 1960, to the Clerk of the Council, Town Hall, Havant.

The Council do not bind themselves to accept the lowest or any Tender.

ST. FAITH'S AND AYLHAM RURAL DISTRICT COUNCIL.

TENDERS FOR STREET LIGHTING EQUIPMENT.

The Council invite TENDERS for the SUPPLY of LIGHTING COLUMNS, LANTERNS, LAMPS and AUXILIARY EQUIPMENT.

Particulars and Form of Tender may be obtained from the CLERK OF THE COUNCIL, Tudor Hall, Rose Lane, Norwich. (N.R. 119.)

FOREHOE AND HENSTEAD RURAL DISTRICT COUNCIL.

BARNHAM BROOM, ETC., WATER SUPPLY.

The above-named Council invite TENDERS from responsible contractors for the PROVISION and LAYING of about 12,000 yd. of 4in. and 3in. dia. SPUN-IRON PIPE WATER MAINS at Barnham Broom, etc.

Plans, Specification and Bills of Quantity can be seen at the Offices of the Council's Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Peckham Road, Nottingham, and copies of the Plan, Specification and Bill of Quantities can be obtained from them after Monday, 10th October, 1960, on deposit of five guineas (by cheque payable to the Forehoe and Henstead R.D.C.), which will be refunded on receipt of a bona-fide Tender not afterwards withdrawn, and the return of all documents loaned the contractor for the purpose of making-up his Tender within seven days of a notice informing him of the acceptance of a Tender "Broom Water."

Sealed Tenders, endorsed "Barnham Broom Water," to be delivered in a plain sealed envelope to the undersigned not later than 12 Noon on TUESDAY, 8th November, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

By Order,
R. F. BLAZEY,
Clerk of the Council.

Ber House,
158 Ber Street,
Norwich.
Norfolk. NOR. 56B.

STRATFORD-ON-AVON RURAL DISTRICT COUNCIL.

SEWERAGE AND SEWAGE DISPOSAL SCHEME.

PRESTON-ON-STOUR.

FIXED-PRICE TENDERS are invited for the LAYING of approx. 800 lin. yd. of 6in. diameter STONEWARE FOUL SEWER, 600 lin. yd. of 4in. diameter SPUN-IRON RISING MAIN and the CONSTRUCTION of 18 CONCRETE MANHOLES, SEWAGE EJECTOR STATION and SMALL SEWAGE DISPOSAL WORKS comprising Sedimentation Tanks, Filter Bed, Humus Tank and Sludge Drying Beds, and other ancillary works.

General Conditions of Contract, Specification and Bills of Quantities may be obtained from the office of the Council's Engineer and Surveyor, MR. J. WOOD, A.I.A.S., A.M.I.P.H.E., 5 Tyler Street, Stratford-on-Avon.

Applications for these documents must be accompanied by a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Sealed Tenders, in the envelope provided, must be delivered to the undersigned not later than 12 Noon on THURSDAY, 17th November, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

D. W. NEWPORT,
Clerk of the Council.

Council Offices,
11 Guild Street,
Stratford-on-Avon,
Warwickshire.
27th September, 1960.

CONTRACTS

BOROUGH OF NEWBURY.
LONDON ROAD PUMPING STATION.

N16/2—CONTRACT M8.

FIRM-PRICE TENDERS are invited for the SUPPLY and ERECTION at LONDON ROAD PUMPING STATION of TWO V.S. CENTRIFUGAL PUMPS, each rated to pump 186,000 gallons/hour of crude unscreened sewage; and THREE DITTO, each rated at 75,000 gallons/hour, together with Motors, Control Gear, Valves, Station Pipework, etc.

Particulars and Specifications obtainable from, and Plans inspected at, the offices of the Consulting Engineers, MESSRS. HOWARD HUMPHREYS AND SONS, West Street, Epsom, Surrey, on and from Wednesday, October 12, 1960, to Wednesday, October 26, 1960, upon payment of a deposit of Five Guineas, made payable to the Corporation, returnable for bona-fide Tender not subsequently withdrawn.

No Tender considered unless on the official form and delivered to the undersigned in plain envelope endorsed as stated in the documents, but bearing no indication of the tender, not later than MONDAY, 28th November, 1960.

The Council do not bind themselves to accept any Tender.

LESLIE SOUTHERN,
Town Clerk.

Municipal Buildings,
Newbury,
Berks.
October, 1960.

BOROUGH OF CHATHAM.

OLD PEOPLE'S HOME (25 FLATLETS).

WAYFIELD ROAD, CHATHAM.

TENDER documents for THIS BUILDING will be available shortly. Contractors who wish to tender are invited to submit their names, together with a cheque for Two Guineas, which will be refunded after receipt of a bona-fide Tender, or return of documents, to MR. J. A. T. RICHARDS, Borough Engineer and Surveyor, Town Hall, Chatham.

Tenders to be received not later than 12 Noon on 28th OCTOBER, 1960.

The Council does not bind itself to accept the lowest or any Tender.

ROWLAND NEWNES,
Town Clerk.

Town Hall,
Chatham.

LEIGHTON BUZZARD URBAN DISTRICT COUNCIL.

BROOKLANDS DRIVE.

PRIVATE STREET WORKS AND ROAD RECONSTRUCTION.

FIXED-PRICE TENDERS are invited for MAKING-UP BROOKLANDS DRIVE, between 108 Brooklands Drive to the junction of Brooklands Drive with South Street, Leighton Buzzard (approx. frontage 1.541ft.), and the RECONSTRUCTION of CARRIAGEWAY from the junction of Brooklands Avenue into Brooklands Drive to 27 Brooklands Avenue, a distance of approx. 85ft.

Plans and Conditions of Contract may be inspected at the office of the Engineer and Surveyor, Council Offices, North Street, Leighton Buzzard, from whom copies of Specification, Bills of Quantities and Form of Tender may be obtained on payment of £2 2s., which is returnable on receipt of a bona-fide Tender.

Tenders, accompanied by Priced Bills of Quantities in plain sealed envelope endorsed "P.S.W.—Brooklands Drive," must be delivered to the undersigned not later than 12 Noon on MONDAY, 31st October, 1960.

The Council does not bind itself to accept the lowest or any Tender.

D. L. OVERTON,
Clerk of the Council.

Council Offices,
Leighton Buzzard,
76th September, 1960.

LEIGHTON BUZZARD URBAN DISTRICT COUNCIL.

STREET LIGHTING IMPROVEMENT.

HOCKLIFFE ROAD (A.4017), STANBRIDGE ROAD (C.238), AND VARIOUS DISTRICT ROADS.

TENDERS are invited for the ERECTION of 28 GROUP A STANTON COLUMNS, complete with Lantarns and Control Gear, on A.4017; the REMOVAL of 17 EXISTING GROUP B COLUMNS and RE-ERECTION, including the Provision of New Lantarns, and the ERECTION of an ADDITIONAL 33 NEW GROUP B STANTON COLUMNS and LANTARNS on STANBRIDGE ROAD (C.238) and various District Roads within the Urban District.

Specification, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Council Offices, North Street, Leighton Buzzard. Applications should be accompanied by a deposit of £2 2s., which will be returned upon receipt of a bona-fide Tender.

Plans and General Conditions of Contract (i.e. Home Contracts with Installations) may be inspected at the office of the Engineer and Surveyor during normal working hours.

Tenders, in plain sealed envelope endorsed "Street Lighting—A.4017," must be delivered to the undersigned not later than 12 Noon on MONDAY, 31st October, 1960.

The Council does not bind itself to accept the lowest or any Tender.

D. L. OVERTON,
Clerk to the Council.

Council Offices,
Leighton Buzzard,
26th September, 1960.

CHESTERFIELD RURAL DISTRICT COUNCIL.

TENDERS are invited for the CONSTRUCTION of the FOLLOWING SCHEME: GLEADHILL-FORD TRUNK SEWER, ECKINGTON, comprising approx. 100 lin. yd. of 6in. diameter Sewer, 2,877 lin. yd. of 9in. diameter Sewer, 3,269 lin. yd. of 12in. Sewer, 85 Manholes, a Storm Overflow Chamber, and incidental Works.

Plans and General Conditions of Contract may be seen at the Engineer's Department. Bills of Quantities, Specification and Form of Tender may be obtained on application to the Council's Engineer and Surveyor, I. B. WIKLEY, M.Eng., M.I.C.E., M.M.M.E., Barrister at Law, Rural Council House, Salford, Chesterfield, on payment of a deposit of Two Guineas by cheque, refundable on receipt of a bona-fide Tender not subsequently withdrawn, together with all the documents.

Tenders, in a plain sealed envelope endorsed "Gleadhills-Ford Trunk Sewer," should be returned to the undersigned by not later than 10 a.m. on WEDNESDAY, 26th October, 1960.

The Council does not undertake to accept the lowest or any Tender.

H. O. HAWKINS,
Clerk of the Council.

Rural Council House,
Chesterfield.

CONTRACTS

MINISTRY OF TRANSPORT.
LONDON-EDINBURGH-THURSO TRUNK ROAD, A.1.

CECIL ROAD FLYOVER—BARNET BY-PASS.

TENDERS are invited for the CONSTRUCTION of the CECIL ROAD FLYOVER over the BARNET BY-PASS in the Urban District of Potters Bar, Middlesex.

The Work includes the Construction of a Five-span Bridge in Reinforced Concrete, with the Centre Span of Precast Prestressed Beams and In-situ Deck Slab, the Approach Embankments and the Lengthening in Reinforced Concrete of an existing Brick Culvert, together with Road Construction, Drainage and ancillary Works.

Contract documents may be obtained from the Consulting Engineers, LESLIE TURNER AND PARTNERS, 6 Grove Road, Sutton, Surrey, on payment of a deposit of £10 by cheque, made payable to the Minister of Transport. The deposit will be returned if a bona-fide Tender is submitted and not subsequently withdrawn.

Tenders should be sent in a plain, sealed registered envelope marked "Tender for Cecil Road Flyover," addressed to the Assistant Secretary, Highways Management and Services Division, Ministry of Transport, 21-27 Hereford Road, London, W.2, arrive not later than 4 p.m. on TUESDAY, 8th November, 1960.

The Minister does not bind himself to accept the lowest or any Tender.

G. G. D. HILL,
An Assistant Secretary.

BOROUGH OF BARNES.

CHARLES STREET—SURFACE WATER SEWER.

TENDERS are invited from experienced civil engineering contractors for the ABOVE WORKS. The works consist of 167 lin. yd. of 9in. dia. Salt Glazed Stoneware Pipe, together with the Construction of Manholes and ancillary works.

The Form of Tender, Bill of Quantities and Specification may be obtained from the undersigned, to whom they should be returned, in the envelope provided, not later than First Post, THURSDAY, 27th October, 1960.

W. R. SHEPHERD, M.I.Mun.E., A.M.I.C.E., F.R.I.C.S.,
Borough Engineer and Surveyor.

Municipal Offices,
Sheen Lane, S.W.14.
27th September, 1960.

FARNBOROUGH URBAN DISTRICT COUNCIL.

TO ROAD CONTRACTORS.

HIGHWAYS ACT, 1959.

MAKING-UP CLOCKHOUSE ROAD UNDER THE PRIVATE STREET WORKS CODE OF 1892.

TENDERS are invited for the CONSTRUCTION of approx. 2,520 sq. yd. of TARMACADAM CARRIAGEWAY, 1,980 sq. yd. of TARMACADAM FOOTWAY, 720 lin. yd. of Kerbing, 630 lin. yd. of 6in. dia. 1 1/2in. dia. Surface Water Sewers, Gullies, Manholes, Retaining Walls, Site Clearance, and other incidental works in connection with the ABOVE PRIVATE STREET.

Specifications, Bills of Quantities and Forms of Tender for this Contract may be obtained from the Council's Engineer and Surveyor, Municipal Offices, Farnborough, Hants., where Plans may be inspected during normal office hours.

Sealed Tenders, in the envelope provided, endorsed "Tender for Clockhouse Road," to be received not later than 12 Noon on TUESDAY, 1st November, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

D. STUART JONES,
Clerk of the Council.

Town Hall,
Farnborough,
Hants.

FRIERN BARNET URBAN DISTRICT COUNCIL.

ERECTION OF 33 LOCK-UP GARAGES.

TENDERS are invited for the ERECTION of TWO SEPARATE SITES OF EIGHT and 25 LOCK-UP GARAGES at WHETSTONE CLOSE, N.20, and COLNEY HATCH LANE, N.10. Construction to be Precast Concrete to manufacturers' standard design, with External Rear and Flank Walls in 4 1/2in. Faced Brickwork.

Specification, Drawings, Bills of Quantities, Form of Tender, etc., may be obtained from the Engineer and Surveyor, Town Hall, Friern Barnet, N.11.

Sealed Tenders, in the envelope provided, bearing no indication of the sender, must be delivered to the undersigned not later than 10 a.m. on WEDNESDAY, 26th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. S. CLOTHIER,
Clerk of the Council.

Town Hall,
Friern Barnet, N.11.
28th September, 1960.

LLANFYLLIN RURAL DISTRICT COUNCIL.

LLANSANTFFRAID, ETC., WATER SUPPLY EXTENSIONS.

STAGE 1.

TENDERS are invited for the CONSTRUCTION of about 1,400 lin. yd. of ASBESTOS-CEMENT WATER MAINS, 4in. in dia., together with Intake Works, Settlement Tank, Filter House, and incidental works, in accordance with the Drawings, Specification, and Bills of Quantities prepared by the Engineers, MESSRS. A. H. S. WATERS AND PARTNERS, of 25 Temple Row, Birmingham, 2.

The Drawings may be seen at, and the General Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from the Offices of the undersigned, or of the Engineers, on or after Friday, 31st October, 1960, on payment of a deposit of Five Guineas, which will be refunded upon receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, on the form supplied and in the endorsed envelope provided, are to be delivered to me at my Office not later than Noon on the 2nd DECEMBER, 1960.

The Council does not undertake to accept the lowest or any Tender.

GLYN JONES,
Clerk of the R.D.C.

R.D.C. Offices,
Llanfyllin,
Montgomerys.

CONTRACTS

COUNTY BOROUGH OF BLACKPOOL.

TENDERS (by 2.30 p.m., WEDNESDAY, 26th October, 1960) are invited for the CONSTRUCTION of CONVENIENCES, approx. 90ft. long, 50ft. wide and 12ft. deep, UNDER the PROMENADE, Blackpool. Documents obtainable from Borough Surveyor (ARTHUR HAMILTON, B.Sc.), Municipal Offices, Blackpool, on payment of £2 deposit.

BOROUGH OF EALING.

TENDERS for CONSTRUCTION of a new SHEET PILE RETAINING WALL and the IMPROVEMENT of the existing RETAINING WALL with MASSED CONCRETE BUTTRESSES, at OCCUPATION ROAD, South Ealing. Details obtainable from Borough Engineer, Town Hall, Ealing, W.5, on payment of £5, returnable on receipt of bona-fide Tender, on MONDAY, 10th October, 1960. Tenders to Town Clerk, Town Hall, Ealing, W.5, by Noon on 23th OCTOBER, 1960.

E. J. COPE-BROWN,
Town Clerk.

BOROUGH OF RUGBY.

LOWER STREET SURFACE WATER SEWER.

TENDERS are invited for the CONSTRUCTION of approx. 567 lin. yd. of 15in. PRECAST CONCRETE SURFACE WATER SEWER, and incidental works. Plans may be inspected at, and Form of Tender, Specification and Bill of Quantities obtained from, the Borough Surveyor's Office, Burdard House, Church Walk, Rugby, on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender and the return of all documents. Tenders, in plain sealed envelopes with no name or mark to indicate the sender, must be delivered to the undersigned not later than Noon on SATURDAY, 29th October, 1960. The Corporation do not bind themselves to accept the lowest or any Tender.

T. L. DUFFY,
Town Clerk.

NESTON URBAN DISTRICT COUNCIL.

BURTON VILLAGE SEWERAGE AND SEWAGE DISPOSAL WORKS.

TENDERS are invited from experienced public works contractors for the ABOVE CONTRACT, to be carried out in Burton Village, Wirral, Cheshire. The work comprises the Laying of some 1,400 yd. of 9in. and 6in. Concrete Sewers complete with Manholes, and the Construction of Small Sewage Works comprising Tanks, Filter and Sludge Beds. Application for the Specification and Bill of Quantities, together with an additional set of the latter only for the contractor's retention, should be made to the Council's Consulting Engineers, MESSRS. WARD, ASHCROFT AND PARKMAN, 38 The Temple, Dale Street, Liverpool, 2, together with a deposit cheque for £5 5s., made payable to the Neston U.D.C., and returnable upon receipt of a bona-fide Tender, completely priced.

Drawings may be inspected either at the Office of the Consulting Engineers or at the Council Offices during the usual office hours, or may be obtained on loan at a non-returnable charge of £3 3s. payable to Messrs. Ward, Ashcroft and Parkman. Tenders, in plain sealed envelopes clearly marked "Burton Sewerage," must be delivered to the undersigned not later than 9 a.m. on MONDAY, 7th November, 1960, and should be accompanied by the names and addresses of three Engineers for whom similar work has been carried out.

The Council does not bind itself to accept the lowest or any Tender, and will not defray any expenses incurred by those tendering.

F. H. D. HARTMAN,
Clerk of the Council.

Town Hall,
Neston,
Wirral, Ches.
September, 1960.

LLEYN RURAL DISTRICT COUNCIL.

TO CONTRACTORS.

EXTENSION OF SEWER AT GARNOLD BEN MAEN, CAERNARVONSHIRE.

The Lleyn Rural District Council invite FIXED-PRICE TENDERS from competent contractors for LAYING approx. 400 yd. of 6in. dia. STONEWARE PIPE SEWER, the Construction of Manholes, and other incidental works, in accordance with Plans, Specification and Quantities prepared by the Council's Engineer, MR. D. LLOYD JONES. Form of Tender, Plans, Specification and Bills of Quantities may be obtained from the undersigned on payment of £3 3s., which shall be refunded on receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders on the approved form, endorsed "Extension of Sewer at Garendolbenmaen," are to be delivered to me at my Office not later than 12 Noon on the 25th OCTOBER, 1960. The Council do not bind themselves to accept the lowest or any Tender, and any Tender accepted by the Council will be subject to the subsequent approval of the Ministry of Housing and Local Government.

R. G. ROBERTS,
Clerk of the Council.

Metro Buildings,
Pwllheli,
Caerns.

HELSTON AND PORTHLEVEN WATER COMPANY, CORNWALL.

TRECOWE COMMON, TRECOWE AND MILLPOOL WATER SCHEME.

TENDERS are invited for PROVIDING and LAYING the FOLLOWING APPROX. LENGTHS of WATER MAINS:

- 3in. Spun-iron with Tyton Joints—2,525 yd.
- 1½in. high density Polythene Tube to 150lb. per sq. in.—1,225 yd.
- 1in. high density Polythene Tube to 150lb. per sq. in.—600 yd.

Bills of Quantities, Specifications, Forms of Tender, with a map of route of mains, may be obtained from the undersigned on payment of a deposit of £5 5s., made payable to the Company, which will be returned on receipt of a bona-fide Tender.

The General Conditions of Contract will be those commonly known as the I.C.E. Conditions of Contract, Fourth Edition, revised June, 1954. Tenders, accompanied by a priced copy of the Bills of Quantities, are to be delivered, in the envelope supplied, by not later than 10 a.m. on WEDNESDAY, 26th October, 1960.

F. J. SEAR,
Secretary.

Helston and Porthleven Water Co.,
Monument Road,
Helston, Cornwall,
September, 1960.

CONTRACTS

GOVERNMENT OF NORTHERN IRELAND.

BELFAST SOUTH APPROACH ROAD.

CONTRACT NO. 103—THREE BRIDGES AND FOUR MILES of ROADWORKS BETWEEN LISBURN ROAD, DUNMURRY, AND SAINTFIELD ROAD, LISBURN.

The MINISTRY of COMMERCE for NORTHERN IRELAND invites TENDERS from competent contractors for the Construction of Three Bridges with ancillary works, and Four Miles of Roadworks.

The Bridges will comprise Reinforced Concrete Piers, Bankseats and Decks. Two Bridges will carry the South Approach Road over a low-level round about junction, and the third will carry an existing road over the South Approach Road. The Roadworks, which will be to motorway standard, will consist of Dual Carriageways each 24ft. wide, together with Hardshoulders, Verges, a Central Reservation, Drainage and Fencing.

Documents can be seen at the Ministry of Commerce, Room 67, Chester House, Chichester Street, Belfast, 1, and also at the Offices of SIR WILLIAM HALCROW AND PARTNERS, at Stanhope House, 47 Park Lane, London, W.1, or 10 Malone Road, Belfast, 9.

Tender Forms, Conditions of Contract, Specification, Bills of Quantities and Drawings may be obtained from the MINISTRY of COMMERCE at the above address on payment of £25, which will be refunded on receipt of a bona-fide Tender and the return of all documents.

Tenders will be received up to, but not later than 3 p.m., on THURSDAY, 10th November, 1960, and should be enclosed in the envelope provided.

The Ministry is not bound to accept the lowest or any Tender. Preference will be given to firms on the King's National Roll.

COUNTY BOROUGH OF BOLTON TRANSPORT DEPARTMENT.

UNIFORM CLOTHING FOR 1961, 1962, 1963.

TENDERS are invited for the SUPPLY of UNIFORMS, CAPS, DUST JACKETS and BOILER SUITS.

Specifications and Forms of Tender from the General Manager and Engineer, Corporation Transport Department, 147 Bradshawgate, Bolton.

Tenders must be delivered to the undersigned by Noon on FRIDAY, 21st October.

PHILIP S. RENNISON,
Town Clerk.

Town Hall,
Bolton.

BOROUGH OF LUTON.

RIDDY LANE IMPROVEMENT.

TENDERS are invited for the CONSTRUCTION and RECONSTRUCTION of 7,300 sq. yd. of CARRIAGEWAY IN DRY LEAN CONCRETE, together with ancillary works on Footpaths, including 9in. and 12in. dia. Surface Water Sewers.

Tender documents obtainable from the Borough Engineer, Town Hall, Luton, on payment of £2 2s. deposit, returnable after receipt of a bona-fide Tender, not subsequently withdrawn. Cheques payable to Luton Corporation.

Tenders to TOWN CLERK, Town Hall, Luton, by Noon, FRIDAY, 21st October, 1960.

CITY OF LINCOLN.

ST. SWITHIN'S SQUARE BROADGATE AND THORNGATE IMPROVEMENT.

TENDERS invited for CARRIAGEWAY WIDENING in 9in. REINFORCED CONCRETE, CARRIAGEWAY RECONSTRUCTION with PITCHED FOUNDATION, and approx. 950 sq. yd. HOT ROLLED ASPHALT and 750 sq. yd. of FINE COLD ASPHALT SURFACING, together with Footpaths and ancillary works.

Applications for documents to City Engineer and Surveyor, 51 St. Swithin Street, Lincoln, accompanied by deposit of Two Guineas (cheques payable to Lincoln Corporation), refunded upon receipt of bona-fide Tender not subsequently withdrawn. General Conditions of Contract and Plans may be inspected at the City Engineer's Office.

Tenders, in plain sealed envelopes endorsed "St. Swithin's Square Broadgate Improvement," must be delivered to the undersigned by First Post, FRIDAY, 4th November, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. HARPER SMITH,
Town Clerk.

Town Clerk's Office,
Saltergate,
Lincoln.

BENFLEET URBAN DISTRICT COUNCIL.

NEW COUNCIL OFFICES.

Contractors wishing to submit a TENDER for the ERECTION of the ABOVE should forward their names from which a panel will be chosen and provided with tender documents.

The work consists of the erection of a two-storey office block, with a council chamber, the building being in brickwork with reinforced concrete floors and flat roof, and is estimated to cost £80,000. The Private Architects for the contract are Gerald Shenstone and Partners, of 34 Bloomsbury Way, London, W.C.1.

Applications should reach the undersigned not later than 15th OCTOBER.

D. GRUDGINGS,
Clerk of the Council.

Council Offices,
Thundersley, Essex.

PRIVATE ESTATE.

STEVENTON (NEAR ABINGDON), BERKS.

TENDERS are invited for the CONSTRUCTION of TARMACDAM ROADWAY, Concrete Kerbing and Asphalt Paving and Grass Verging, together with the Construction of Surface Water Sewers at the Steventon Estate, near Abingdon, Berks.

Specifications, Bills of Quantities, General Conditions of Contract and Form of Tender may be obtained on application to the Surveyor, FRANK OSBORNE, at the address below, any day during the office hours, on payment of £2 2s., which will be repaid after receipt of a bona-fide Tender.

Tenders, in plain envelopes, sealed and endorsed "Tender for Street Works," must be addressed and delivered to the above by not later than 12 Noon on FRIDAY, 28th October, 1960.

The Surveyor does not bind himself to accept the lowest or any Tender.

FRANK OSBORNE,
Surveyor.

Bedfordshire House,
King Street,
Luton, Beds.

CONTRACTS

COUNTY BOROUGH OF SOUTHAMPTON.

QUOTATIONS are invited from heating engineers for MECHANICAL SERVICES at COLLEGE of TECHNOLOGY, Southampton, to be Sub-contractors to Main Contractor (R.I.B.A. Contract plus Supplemental Conditions available for inspection). Forms and particulars from Borough Architect on written application by 14th October, 1960.

Quotation to the TOWN CLERK, Civic Centre, Southampton, by 12 Noon on 21st NOVEMBER, 1960.

BOROUGH OF WANSTEAD AND WOODFORD.

OLD MILL PLAYING FIELD AND RODING LANE SPORTS GROUND.

TENDERS are invited for the PREPARATION of the ABOVE SITES for PLAYING FIELDS, including Site Clearance, Grading, Land Drainage, Cultivation, Soiling and Seeding approx. 39 acres, the Construction of Access Roads, Piping in Ditch, Planting of Trees, and all ancillary works.

Plans may be inspected and Tender documents obtained from the Borough Engineer on receipt of a deposit of Three Guineas, refunded on return of all documents and/or receipt of a bona-fide Tender.

Tenders to be delivered to the undersigned by Noon on 24th OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

A. MCCALLIE FINDLAY,
Town Clerk.

CITY OF BRADFORD.

HOLME WOOD HOUSING ESTATE—FOOTPATH AND VERGE WORKS.

THIRD SECTION—PART III AND PART IV.

TENDERS are invited for FLAGGING, SOILING and LANDSCAPING WORK on Part III and Part IV of the Third Section of the ABOVE ESTATE.

Contract documents may be obtained on payment of a two Guinea deposit, refundable on receipt of a bona-fide Tender, not subsequently withdrawn, or one return of the documents, from the City Engineer and Surveyor, Town Hall, Bradford, at whose Office drawings may be inspected.

Separate contract will be let for Part III and Part IV of the work, and contractors may tender for either or both parts.

Tenders to be returned to the undersigned, in the envelope provided, endorsed "Tender—Holme Wood Estate—Flagging," but bearing no name or mark to indicate the sender, not later than 18th OCTOBER, 1960.

HENRY PATTEN,
Town Clerk.

Town Hall,
Bradford, 1.

WESTMINSTER CITY COUNCIL.

TENDERS are invited, by the 29th OCTOBER, 1960, for UNIFORM CLOTHING and OVERALLS for 12 months, commencing the 1st January, 1961. Applications for forms, accompanied by large stamped addressed envelopes, to TOWN CLERK, Westminster City Hall, Lining Cross Road, W.C.2.

WIRRAL URBAN DISTRICT COUNCIL.

PRIVATE STREET WORKS.

FIXED-PRICE TENDERS are invited for the MAKING-UP of GROVE AVENUE, Heswall (approx. length 149 lin. yd.), and LAUREL AVENUE, Heswall (approx. length 97 lin. yd.).

The Specification, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Council Offices, Heswall, at which Office the Plans and Conditions of Contract may be inspected during normal working hours.

Tenders, in plain sealed envelopes endorsed "Private Street Works—Grove Avenue and Laurel Avenue," must be delivered to the undersigned not later than 10 a.m. on SATURDAY, 15th October, 1960.

The Council does not bind itself to accept the lowest or any Tender received.

W. F. ROBERTS,
Clerk of the Council.

Council Offices,
Heswall,
Wirral.

RURAL DISTRICT COUNCIL OF GLOUCESTER.

HEMPSTEAD SEWERAGE SCHEME.

The Council invite TENDERS on a Fixed-price Basis from contractors having experience in similar works, for the ABOVE-MENTIONED SCHEME, which consists of the FOLLOWING:

- (a) Laying of approx. 1,700 lin. yd. of 6in. dia. G.S.S. Sewers, together with the Construction of relevant Manholes.
- (b) Construction of Two Sewage Diverter Stations.
- (c) Laying of approx. 700 lin. yd. of 4in. dia. Spun-iron Pumping Main.
- (d) House Connections.

All in accordance with the Drawings, Specification, Bill of Quantities and Conditions of Contract prepared by MESSRS. W. HERBERT BATEMAN AND PARTNERS, of Bathaston, the Consulting Engineers to the Council.

The Drawings, Specification, Bill of Quantities and General Conditions of Contract will be available for inspection by appointment at the Office of the Council or at the office of the Consulting Engineers during normal office hours on and after 17th October, 1960, but technical questions can be dealt with only at the latter office.

Copies of the General Conditions, Specification, Bill of Quantities and Form of Tender will be issued to intending contractors on application to Messrs. W. Herbert Bateman and Partners, Chesterfield House, Bathaston, Bath, on or after 17th October, 1960. Applications must be accompanied by a deposit of £3 3s., which will be returned upon receipt of a bona-fide Tender not subsequently withdrawn.

Applications for Tender documents must be accompanied by the names and addresses of three engineers under whose direction similar schemes have been carried out by the applicant.

Tenders, on the form provided in the Bill of Quantities, accompanied by the Bill of Quantities priced in ink, must be delivered, in sealed packages endorsed "Hempstead Sewerage Scheme," to the undersigned at 29 Brunswick Square, Gloucester, not later than First Post on MONDAY, the 14th November, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and will not be responsible for any expenses incurred by those tendering.

W. J. KNIGHT,
Clerk of the Council.

29 Brunswick Square,
Gloucester,
3rd October, 1960.

CONTRACTS

LANCASHIRE COUNTY COUNCIL.

TENDERS are to be invited from building contractors for DEVELOPMENT OF PLAYING FIELDS AND PROVISION OF BOUNDARY FENCING, etc., at the following:

Billington R.C. Secondary School.
Longridge R.C. Secondary School.
Prescot St. Luke's R.C. Primary School.
Ulverston Croftlands County Primary School.
Applications for documents to tender must be received by the COUNTY ARCHITECT, P.O. Box 26, County Hall, Preston, not later than 18th OCTOBER, 1960, quoting Ref. A/C1.
Municipal Buildings,
Taunton.

COUNTY BOROUGH OF SOUTHEND-ON-SEA.

Contractors interested in submitting a TENDER for BELLHOUSE ROAD IMPROVEMENT, involving the Widening of approx. 750yd. of Carriageway in Dry Lean Concrete with 3in. Gravel Asphalt Surfacing, with Kerbs and Footpaths; and the Laying of approx. 850yd. of 9in.-18in. Sewers and incidental works in connection therewith, should submit their names, together with a deposit of £2, before MONDAY, 10th October, to the Borough Engineer and Surveyor for inclusion on a list of contractors for whom Tenders will be invited. The deposit will be refunded on receipt of a bona-fide Tender and/or the return of all loaned documents.

Sealed Tenders, addressed to the undersigned and endorsed "Bellhouse Road Improvement," are to be delivered to this Office by 3 p.m. on a date to be specified, and no Tender received thereafter will be considered.

No Tender will be received except in the special envelope provided, which shall not bear any name or mark indicating the sender.

The Corporation does not bind themselves to accept the lowest or any Tender.

ARCHIBALD GLEN,
Town Clerk.

BOROUGH OF WIDNES.

CONTRACT NO. 391—CONSTRUCTION OF FOOTWAYS—LIVERPOOL PLACE.
CONTRACT NO. 392—MAKING-UP OF HEATHVIEW ROAD (PART).

TENDERS are invited for the FOLLOWING CONTRACTS:

- Construction of Footways, Liverpool Place, consisting of approx. 380 sq. yd. of Flagging and 170 sq. yd. of Concrete Footway Crossings.
- Making-up of Heathview Road (Part), consisting of approx. 240 sq. yd. of 6in. Unreinforced Concrete Carriageway, 240 sq. yd. of 12in. Cold Asphalt Surfacing, 82 lin. yd. of Kerbing, 180 sq. yd. of Flagging.

Copies of the Specification, Bills of Quantities and Forms of Tender may be obtained from the Borough Engineer, Town Hall, Widnes, on payment of a deposit of Two Guineas each Contract, returnable on receipt of a bona-fide Tender or subsequently withdrawn.

Tenders, in the envelope provided, to reach the Borough Engineer, not later than 12 Noon on MONDAY, 31st October, 1960.

FRANK HOWARTH,
Town Clerk.

own Hall,
Widnes,
October, 1960.

TROWBRIDGE URBAN DISTRICT COUNCIL.

PROPOSED ROAD IMPROVEMENT AT FROME ROAD (A.361), TROWBRIDGE.

TENDERS are invited for the ABOVE-MENTIONED WORKS, which extend over a section of road 500yd. in length, and which include the following: Widening of Carriageway; Construction of New Kerb and Footpath; Reconstruction of Existing Footpath; Surface Water Drainage; Accommodation Works on properties abutting on to the Improvement Works.

Tendering documents may be obtained from the Engineer and Surveyor, Town Hall, Trowbridge, on and after Monday, 26th September, on payment to the Council of a deposit of Two Guineas, which will be returned only on receipt of a bona-fide Tender and return of all documents. The General Conditions of Contract (I.C.E. Conditions) may be inspected at the Town Hall during normal office hours.

The Council do not bind themselves to accept the lowest or any Tender.

No Tender will be considered unless received on the Form of Tender and in the envelope provided, sealed, and delivered to the undersigned by Noon on MONDAY, the 17th October, 1960.

IEUAN EVANS,
Clerk of the Council.

Town Hall,
Trowbridge,
September, 1960.

WINSLOW RURAL DISTRICT COUNCIL.

SWANBOURNE, MURSLEY AND STEWKLEY SEWERAGE AND SEWAGE DISPOSAL.

TO CONTRACTORS.

The above-named Council invite TENDERS for the EXECUTION OF WORKS OF SEWERAGE, comprised in the Furnishing and Laying of about 6,400yd. of 9in. and 6in. Stoneware and Spun-Iron Pipe Sewers, Manholes, Ventilators, etc., about 500yd. of 4in. Asbestos-cement Pumping Main, and the Construction of a Sewage Pumping Station and Sewage Disposal Works consisting of Screening Chambers, Sedimentation Tanks, Percolating Filter, Humus Tanks, Sludge Drying Beds, Feed, Effluent, Sludge and Topwater Pipes, etc., and other appurtenant works.

Contractors, who must have had considerable experience in similar work, and who are desirous of tendering, should send their names and addresses to MESSRS. D. BALFOUR AND SONS, Consulting Engineers, 131 Victoria Street, Westminster, S.W.1, accompanied by a cheque deposit of Five Pounds, made payable to the Winslow Rural District Council, not later than Monday, 24th October, 1960, after which full particulars will be forwarded. The deposit will be returned on receipt of a bona-fide Tender and on return of all printed forms and Plans after the Contract is let.

Tenders, in plain sealed envelopes endorsed "Tender for Main Sewerage," must be sent to the undersigned by a date to be given by the Engineers. The Council do not bind themselves to accept the lowest or any Tender.

R. G. BROWN,
Clerk to the Council.

Council Offices,
28 High Street,
Winslow,
Bletchley, Bucks.

CONTRACTS

NORTHUMBERLAND COUNTY COUNCIL.

COUNTY SURVEYOR'S DEPARTMENT.
SUPPLY OF 20-TON LOW-LOADER.

TENDERS are invited for the SUPPLY of One Articulated Diesel-engined LOW-LOADER to carry 20 tons, with detachable trailing axes for rear loading. Specification, etc., may be had on application to the County Surveyor, Phoenix House, Queen Street, Newcastle-upon-Tyne, 1.

Tenders, in a plain sealed envelope, endorsed "Tender for Low-loader—9 a.m., 17th OCTOBER, 1960," should reach the Clerk of the County Council, County Hall, Newcastle-upon-Tyne, 1, by this time and date.

E. P. HARVEY,
Clerk of the County Council.

COUNTY BOROUGH OF BLACKBURN.

PRIVATE STREET WORKS—NORTH ROAD.

Contractors wishing to TENDER for the ABOVE WORK should submit their names and addresses to the Borough Engineer, Town Hall, Blackburn, by OCTOBER 15th, 1960. Bills of Quantities and Specification will be forwarded in due course.

FRANK SQUIRES,
Town Clerk.

COUNTY BOROUGH OF DUDLEY.

TIPTON ROAD OMNIBUS LOADING BAY.

TENDERS.

Applications to tender are invited for the ABOVE CONTRACT. The work comprises Excavations for, and the Laying of, 220 sq. yd. of Reinforced Concrete, 100yd. of Kerb, and ancillary works.

Applications for Tender documents should be addressed to the Borough Engineer and Surveyor, Council House, Dudley, Worcs., accompanied by a deposit of £2 2s., which will be returned upon receipt of a bona-fide Tender or subsequently withdrawn, and the return of the documents.

The latest date for receipt of applications is Wednesday, 12th October, 1960, and Tender documents will be forwarded as soon as possible after that date.

P. D. WADSWORTH,
Town Clerk.

The Council House,
Dudley, Worcs.,
28th September, 1960.

BOROUGH OF TAUNTON.

TENDERS are invited, by 10 a.m. on 24th OCTOBER, for the CONSTRUCTION of the EXTENSION to THE CRESCENT CAR PARK, approx. 4,000 sq. yd. of Foundation and Tarmacadam Surfacing and ancillary works.

Specification, Bill of Quantities and Form of Tender obtainable from Borough Engineer, St. Paul's House, Taunton.

K. A. HORNE,
Town Clerk.

BOROUGH OF KIDDERMINSTER.

DEMOLITION—HALL STREET, ANCHORFIELDS, AND THE RIFLE RANGE.

TENDERS are invited from experienced demolition contractors for the FOLLOWING WORK:—

- Hall Street—Demolition and Site Clearance of 27 Properties.
- Anchorfields—Demolition and Site Clearance of Two Properties.
- Rifle Range—Demolition and Site Clearance of One Building.

Copies of the Form of Tender, Conditions of Contract and Specification may be obtained from the Borough Engineer and Surveyor, 110 Mill Street, Kidderminster.

Tenders must reach the undersigned, in the envelope provided, not later than Noon on WEDNESDAY, 19th October, 1960.

The Council is not bound to accept the lowest or any Tender.

JOHN L. EVANS,
Town Clerk.

Town Hall,
Kidderminster,
29th September, 1960.

CITY OF CHESTER.

PROPOSED INTERNAL BY-PASS.

TENDERS are invited from experienced and competent civil engineering contractors for the FOLLOWING MAJOR ROADWORKS:—

CONTRACT No. 587.—Pepper Street Improvement, involving the Reconstruction and Widening of an existing Road and Main Junction, total carriageway area approx. 4,500 sq. yd., together with Footpaths, Drainage, etc.

CONTRACT No. 588.—Vicars Lane Improvement, involving the Strengthening, Widening and Partial Re-alignment of an existing Road, total carriageway area approx. 2,500 sq. yd., together with Footpaths, Drainage, etc.

CONTRACT No. 589.—Liverpool Road/Parkgate Road Gravitator System, involving Raising Parkgate Road substantially, the Construction of a Link Road and Reconstruction of a section of Liverpool Road, Construction of Retaining Walls, etc., total carriageway area approx. 4,350 sq. yd., together with Footpaths, Drainage, etc.

Specifications, Bills of Quantities, etc., may be obtained from and Drawings and Conditions of Contract inspected at the Office of the City Engineer and Surveyor, 49 Northgate Street, Chester.

Tenders, in separate sealed envelopes, appropriately endorsed, must be returned to reach the TOWN CLERK, Town Hall, Chester, not later than SATURDAY, 5th November, 1960.

CATERHAM AND WARRLINGHAM URBAN DISTRICT COUNCIL.

PRIVATE STREET WORKS—GEORGES TERRACE, CATERHAM.

TENDERS are invited for the ABOVE WORKS, which include approx. 500 sq. yd. of Bitumen Macadam Carriageway Surfacing, 120 sq. yd. of New Bitumen Macadam Footpath, and 120yd. of Concrete Kerbing.

Forms of Tender, Bills of Quantities and Specifications may be obtained from, and the Drawings inspected at, the Office of the Engineer and Surveyor, Council Offices, Caterham.

Tenders, enclosed in the endorsed envelope provided, are to be delivered to the undersigned not later than 4 p.m. on 4th NOVEMBER, 1960.

B. J. SMERDON,
Clerk of the Council.

Council Offices,
Caterham.

CONTRACTS

BOROUGH OF MAIDSTONE.

CONSTRUCTION OF RETAINING WALL AND HARDSTANDING AT LOCKMEADOW MARKET, MAIDSTONE.

TENDERS are invited for the CONSTRUCTION of a RETAINING WALL approx. 85yd. in length, in Mass Concrete, and a HARDSTANDING approx. 700 sq. yd. in area, in Hardcore and Tarmacadam, at Lockmeadow Market, Maidstone.

Specification and Bills of Quantities may be obtained from, and Drawings seen at, the Office of the Borough Engineer, Palace Avenue, Maidstone.

Tenders, in plain sealed envelopes endorsed "Construction of Retaining Wall and Hardstanding at Lockmeadow Market," must reach the undersigned not later than 10 a.m. on MONDAY, 17th October, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

T. SCHOLES,
Town Clerk.

13 Tonbridge Road,
Maidstone.

BOROUGH OF SCUNTHORPE.

TENDERS FOR THE ERECTION OF ONE 14-STORY BLOCK OF 79 FLATS ON THE WESTCLIFF ESTATE, SCUNTHORPE.

The Council invites contractors who have previously undertaken similar contracts and who wish to submit a TENDER for THIS WORK to forward their names to the undersigned not later than MONDAY, 10th October, 1960.

The Council reserves the right to select from the applicants a list of firms who will be invited to submit Tenders, and does not bind itself to accept the lowest or any Tender.

A deposit of Five Guineas will be required from those firms selected, which will be returned on the receipt of a bona-fide Tender or return of the Bill of Quantities.

T. M. LISTER,
Town Clerk.

Municipal Offices,
34 High Street
Scunthorpe,
26th September, 1960.

CITY AND COUNTY OF BRISTOL.

KING'S HEAD LANE RECREATION GROUND.

TENDERS invited for CONSTRUCTION of a PLAYGROUND AND PLAYING FIELDS AND CULTIVATING PARKLAND on ABOVE SITE. The Recreation Ground is 11 acres in extent.

Plans seen and copies of Conditions of Contract, Specification and Bill of Quantities obtained upon application to the City Engineer and Planning Officer, Cabot House, Deansway Road, Bristol, 1.

Tenders, in envelope provided, endorsed "King's Head Lane Recreation Ground," but bearing no mark to indicate sender, to CITY ENGINEER AND PLANNING OFFICER by 8th NOVEMBER.

The letting of this Contract is subject to approval of Ministry of Housing and Local Government.

CITY OF MANCHESTER.

TENDERS are re-invited for the SUPPLY of approx. 2,000 TIME SWITCHES during 1961.

Tender Forms, returnable 18th OCTOBER, 1960, from the CITY SURVEYOR, Town Hall, Manchester, 2.

THINGOE RURAL DISTRICT COUNCIL.

SEWERAGE—VILLAGE OF STANTON.

The Council invites FIXED-PRICE TENDERS for the LAYING OF approx. 1,800yd. of 6in. dia. GLAZED STONEWARE SEWER AND MANHOLES IN STANTON. The Contract Agreement will be in the form prescribed by the Joint Engineering Bodies, and Specifications, Bills of Quantities and Plans may be obtained from the Engineer and Surveyor at the undermentioned address on payment of £3 3s., repayable upon the return of all documents with bona-fide Tender.

Completed Tender Forms should be forwarded to the undersigned in plain sealed envelopes, marked "Stanton Sewerage," to be received not later than First Post on MONDAY, 31st October, 1960.

The Council does not bind itself to accept the lowest or any Tender.

J. H. WHITFIELD,
Clerk of the Council.

1 Northgate Street
Bury St. Edmunds,
Suffolk,
30th September, 1960.

HAMBLEDON RURAL DISTRICT COUNCIL.

SITE DEVELOPMENT WORKS AT PARSONAGE ROAD, CRANLEIGH.

TENDERS are invited for the CONSTRUCTION of a SHORT CUL-DE-SAC ROAD leading off Parsonage Road, and comprising approx. 320 super. yd. of 2in. thick Gravel Asphalt Surfacing with Foundation to Carriageway, including 120 lin. yd. of Precast Concrete Kerbing, 70 super. yd. Footpaths of 2in. Tar Paving, and other minor ancillary works.

A Specification, Plan, Bill of Quantities and Form of Tender may be obtained from the Office of the Engineer and Surveyor on payment of a deposit of £2 2s., returnable upon receipt of a bona-fide Tender and the return of all documents. Cheques should be made payable to the Hambledon Rural District Council, crossed Lloyds Bank Limited, and sent to the Treasurer, Council Offices, Bury Fields, Guildford.

Tenders, in the endorsed envelopes provided, are to be delivered to the undersigned not later than 12 Noon on MONDAY, 17th November, 1960. The Council do not bind themselves to accept the lowest or any Tender, and acceptance will be subject to the approval of the Ministry of Housing and Local Government.

Dated this 29th day of September, 1960.

ROBIN I. GARLAND,
Clerk to the Council.

Council Offices,
Bury Fields,
Guildford,
Surrey.

EPPING AND ONGAR RURAL DISTRICT COUNCIL.

MORETON SEWERAGE SCHEME.

Experienced civil engineering contractors are invited to apply for CONTRACT DOCUMENTS for the CONSTRUCTION of a SEWAGE DISPOSAL WORKS and 3,500yd. of 6in. SEWER for the Village of MORETON.

Applications, together with a deposit of £2 2s., should reach the ENGINEER AND SURVEYOR, 209 High Street, Epping, by MONDAY, 24th October, 1960.

CONTRACTS

STATES OF JERSEY.

SEWERAGE BOARD.

RECONSTRUCTION OF SEWERS.

TENDERS will shortly be invited from a select list of tenderers for the RECONSTRUCTION of approx. 467 lin. yd. of OLD BRICK SEWER by the CEMENT GUN PRESHOT CONCRETE SECTION METHOD OF LINING, and the CONSTRUCTION of approx. 150yd. of new 9in. dia. SEWER, together with Connections, Manholes, and ancillary works.

Contractors wishing to be included in the list are invited to submit to the undersigned their names, together with evidence of their competence to undertake works of this nature.

Applications will be received up to the 13th October, 1960.

No undertaking is given that all applicants, or any one, will be invited to tender.

(Signed) S. AVERILL, GOTHARD, B.Sc., M.I.C.E., Hon.M.Inst.S.P., Consultant Engineer.

Public Health Offices,
South Hill,
St. Helier,
Jersey.

NORTHAMPTONSHIRE COUNTY COUNCIL.

TENDERS will shortly be invited for the FOLLOWING:

Corby Beanefield New Infants' School (Single-storey Load-bearing Brickwork and Part Steel Frame).

Roads Modern School Extensions (Two-storey Steel Frame).

Contractors wishing to tender for (a) Erection, or (b) Electrical Installations are asked to notify the County Architect, County Hall, Northampton, by 17th October. From the names received, the Committee concerned will select firms to whom particulars will be sent.

J. ALAN TURNER,
Clerk of the County Council.

County Hall,
Northampton.

BOROUGH OF SLOUGH.

ALBERT STREET IMPROVEMENT—STAGE I.

TENDERS are invited for the IMPROVEMENT OF ALBERT STREET (Stage I), comprising approx. 1,700 sq. yd. of Concrete Carriageway Base, 4,000 sq. yd. of Hot Rolled Asphalt Surfacing, 1,000 lin. yd. of Kerbing, and ancillary works.

Specifications, Bills of Quantities and Form of Tender are obtainable from the BOROUGH ENGINEER, Town Hall, Slough, Bucks., on payment of a deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender and the return of all documents. Drawings and Conditions of Contract may be inspected at the Borough Engineer's Office during normal office hours.

Tenders, on the prescribed form, must be returned, in the envelope provided, not later than Noon on WEDNESDAY, 26th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

BOROUGH OF HIGH WYCOMBE.

CONTRACT NO. 6.

HUGHENDEN ROAD FOUL AND SURFACE WATER RELIEF SEWERS.

TENDERS are invited for the CONSTRUCTION OF the ABOVE SEWERS.

The work comprises approx. 900 yd. of 15in.-21in. Foul Sewer and approx. 1,000 yd. of 21in.-24in. Surface Water Sewer, mainly Concrete Pipes with Double Seal Joints in open cut; In-situ Concrete Manholes; Trunk Road and River Crossing; the inter-connection of Surface Water Sewers, and ancillary works. Considerable lengths of this sewer will be laid in water-bearing ballast and through built-up areas. Specification, Bills of Quantities and Form of Tender may be obtained from the Borough Engineer's Department, Municipal Offices, High Wycombe, on receipt of a cheque for £5, which will be returned on receipt of a bona-fide Tender.

Drawings will be sent to contractors for use in submitting a Tender, and inquiries may be made at the above address between 9 a.m. and 5 p.m., Monday to Friday.

Only contractors who have the organisation, labour and plant to carry out the work in an expeditious and workmanlike manner, and have had extensive experience in work of a similar nature, should submit a Tender for this work.

Tenders must be returned, in the envelope provided, by Noon on MONDAY, 14th November, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. A. PARKINSON, M.A., A.M.I.C.E., Borough Engineer and Surveyor.

BOROUGH OF DEAL.

MILL ROAD IMPROVEMENT.

FIXED-PRICE TENDERS invited for the RECONSTRUCTION OF CARRIAGEWAY AND FOOTPATHS including 4,700 sq. yd. of Tarmacadam and Asphalt Surfacing, with 10in. Lean-mix Sub-base; 1,250 lin. yd. of Kerbing and Channelling; 2,800 sq. yd. of Precast Flag Footpath, and ancillary works.

Tender form, Specification and Bills of Quantities obtainable from the Borough Engineer on payment of Two Guineas, returnable to a bona-fide tenderer. Drawings may be inspected at the Borough Engineer's Office.

Tenders must reach me by 10 a.m., 19th OCTOBER, 1960.

E. BRADBURY,
Town Clerk.

Municipal Offices,
Queen Street,
Deal.

CITY OF ST. ALBANS.

HOUSING—JERSEY FARM ESTATE.

TENDERS are invited for the ERECTION OF 48 HOUSES and 76 GARAGES on the Jersey Farm Estate, St. Albans.

Bills of Quantities and Form of Tender can be obtained from, and Drawings inspected at, the Office of the City Engineer and Surveyor, 16 St. Peter's Street, St. Albans, on payment of a £3 ss. deposit, which sum will be returned on receipt of a bona-fide Tender not subsequently withdrawn.

Form of Tender, in the endorsed envelope provided, to be delivered to reach the undersigned not later than MONDAY, 14th November, 1960.

B. V. ENTWISTLE,
Town Clerk.

38 St. Peter's Street,
St. Albans.

CONTRACTS

URBAN DISTRICT COUNCIL OF BASILDON.

MARKHAM'S CHASE RECREATION GROUND—PART I.

TENDERS will shortly be invited for the PREPARATION OF GRASSSED AREA (approx. 10 acres) and LAND DRAINAGE WORKS as Part I of the ABOVE RECREATION GROUND.

Experienced contractors wishing to tender should apply for the Bills of Quantities, Specifications, and Plans to the Council's ENGINEER AND SURVEYOR, 88 Town Square, Basildon, by not later than 14th OCTOBER. The application should be accompanied by a deposit of £2 2s. (Two Guineas), which will be returned on receipt of a bona-fide Tender not subsequently withdrawn, and the return of all documents.

Contractors applying for documents should give the names of other Authorities for whom they have executed work of a similar nature.

LEYLAND URBAN DISTRICT COUNCIL.

PRIVATE STREET WORKS.

HOUGH LANE GROUP.

TENDERS are invited for the ABOVE GROUP OF PRIVATE STREET WORKS.

The works include the Construction of approx. 2,560 sq. yd. of Hot Rolled Asphalt Surfacing with Wet-mix Foundation; 2,580 sq. yd. of Tarmacadam Surfacing with Hardcore Foundation; 4,680 sq. yd. of Concrete Slab Back Streets, together with Flagged Footways, Kerbing, Channelling and Surface Water Drainage.

Drawings may be inspected at the Office of MR. F. D. HOWE, M.I.Mun.E., Engineer and Surveyor, Council Offices, Leyland, from whom documents and Form of Tender may be obtained on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender. Cheques should be made payable to Leyland Urban District Council.

Tenders, in a plain sealed envelope and endorsed "Private Street Works," must be delivered to the undersigned not later than 12 Noon on MONDAY, the 17th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. C. F. GODSELL,
Clerk of the Council.

Council Offices,
Leyland, Lancs.
September, 1960.

BEESTON AND STAPLEFORD URBAN DISTRICT COUNCIL.

EXTENSIONS AND MODIFICATIONS TO SEWAGE DISPOSAL WORKS AT BESSELL LANE, STAPLEFORD.

The Council invite TENDERS, on a Fixed-price Basis, from responsible and fully experienced contractors for the ABOVE WORKS in Reinforced and Mass Structures comprising new Screening Chambers, Grit Channels, Pumps, Settling Tanks, Balancing Tanks, Settling Tanks, Filter Beds, Humus Tanks, Digestion Tanks, Sludge Drying Beds, Pipelines, and ancillary works on site.

The Drawings, Specification and Bill of Quantities may be inspected at the Office of the Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Pelham Road, Nottingham, and copies of the Tender documents may be obtained from them on deposit of Ten Guineas by cheque (payable to Beeston and Stapleford U.D.C.), which will be refunded on receipt of a bona-fide Tender not afterwards withdrawn, and the return of all documents loaned to the contractor for the purpose of making-up his Tender. Tenders are to be delivered to the undersigned, in a plain sealed envelope, endorsed "Beeston and Stapleford Sewage Disposal Works," to reach him by 29th November, 1960.

The lowest or any Tender will not necessarily be accepted, and a Tender is subject to the final approval of the Minister of Housing and Local Government.

H. D. JEFFRIES,
Clerk of the Council.

Town Hall,
Beeston
Nottingham.

SAMFORD RURAL DISTRICT COUNCIL.

SEWERAGE OF HOLBROOK.

CONSTRUCTION OF SEWERS AND SEWAGE DISPOSAL WORKS.

The Samford Rural District Council invite TENDERS from public works contractors for the LAYING OF approx. 1½ miles of 6in. and 9in. dia. CONCRETE SEWERS and the CONSTRUCTION OF a SEWAGE DISPOSAL WORKS.

Tender documents and Drawings may be obtained during the period 28th September to 31st October, 1960, inclusive, at the Office of the Engineer, MESSRS. BINNIE, DEACON AND GURLEY, Artillery House, 111, Pall Mall, Westminster, S.W.1, on payment of a cheque for £10 made payable to the Samford Rural District Council, which amount will be refunded on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tender for Sewerage of Holbrook," must be delivered at my Office before Noon on 28th NOVEMBER, 1960.

The Council do not undertake to accept the lowest or any Tender, and will not defray any expenses in connection with tendering, but tenderers must make themselves fully acquainted with the site and conditions of work.

R. BLENKINSOPP,
Clerk to the Council.

Samford R.D.C.,
North Lodge,
25 London Road,
Ipswich, Suffolk.

ETON RURAL DISTRICT COUNCIL.

MAIN DRAINAGE—CROWN LANE, EAST BURNHAM.

Civil engineering contractors wishing to be considered for inclusion in a selected list of contractors to TENDER for the CONSTRUCTION OF approx. 1,900 lin. yd. of 6in. dia. CONCRETE FOUL SEWERS and 200 lin. yd. of 5in. dia. SPUN-IRON PUMPING MAIN, together with a Pumping Station approx. 18ft. deep, are invited to apply in writing to the undersigned by not later than 28th October, 1960.

A Plan of the proposed Scheme may be seen during normal office hours at the Office of the Engineer and Surveyor, Council Offices, Windsor Road, Slough, from whom any further information may be obtained.

G. L. BRIDGER,
Clerk to the Council.

Council Offices,
Windsor Road,
Slough, Bucks.
30th September, 1960.

CONTRACTS

ROYAL BOROUGH OF NEW WINDSOR.

STREET LIGHTING SCHEME, 1961.

TENDERS are invited for the FOLLOWING STREET LIGHTING INSTALLATION, which forms part of "The Windsor Project":—

- 26 approx. 400-W Colour-corrected Mercury Vapour Lamps on Wall Brackets in the Thames Street/High Street area.
- 17 approx. various 80/125-W Colour-corrected Mercury Vapour Lamps, mostly in side streets on Brackets.
- Six approx. 80/125-W Colour-corrected Mercury Vapour Lamps in Special Lanterns. The Removal of the existing Group "A" Steel Street Lighting Columns.

Plans may be inspected at the Borough Engineer's Office, Kipling Building, Alma Road, Windsor, from which Specification, Form of Tender and Conditions of Contract may be obtained.

Tenders, in the official envelope provided, must reach me by First Post on FRIDAY, 21st October. The Council does not bind itself to accept the lowest or any Tender.

T. A. TOWNDROW,
Acting Town Clerk.

ROYAL BOROUGH OF NEW WINDSOR.

MAIDENHEAD ROAD (A.308) IMPROVEMENT—STAGE III.

TENDERS are invited for the WIDENING of the existing CARRIAGEWAY to 33ft., PROVISION of 6ft. FOOTWAY, and SURFACE WATER DRAINAGE. The carriageway will be constructed on a hoggin embankment of lean concrete, bituminous surfacing. Footway to have bituminous surfacing. Minimum overall width of highway 60ft., length 450yd.

Specifications, Bills of Quantities and Form of Tender may be obtained from, and the Plans and Conditions of Contract inspected at, the Offices of the Borough Engineer, Municipal Offices, Alma Road, Windsor.

Tenders to be returned, in the official envelope provided, not later than Noon, MONDAY, 31st October.

T. A. TOWNDROW,
Acting Town Clerk.

CITY OF MANCHESTER.

TENDERS invited for HEATING and HOT WATER SERVICE BOILER HOUSE PLANT TO COMBINED CLINIC, WILMSLOW ROAD, WITTINGTON.

Specification and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall. Tenders returnable by OCTOBER 18th.

CITY OF MANCHESTER.

TENDERS invited for the FOLLOWING:—

- Electrical Installation.
- Supply and Erection of Electric Passenger/Goods Lift at New Hostel Block, Disbury Training College.

Specifications and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall. Tenders returnable by OCTOBER 26th.

CITY OF MANCHESTER.

HOUSING COMMITTEE.

TENDERS invited (returnable Noon, 24th NOVEMBER, 1960) for the FOLLOWING:—

CONTRACT 352.—Erection of 42 Dwellings, Butler Street, Miles Platting.

CONTRACT 354.—Erection of 229 Dwellings, Collyhurst Street, Collyhurst.

Documents obtainable from DIRECTOR OF HOUSING, Town Hall, Manchester, 2.

BASILDON URBAN DISTRICT COUNCIL.

GRAYS HILL SEWERAGE SCHEME.

TENDERS will be invited for the CONSTRUCTION of approx. Two Miles of SEWERS, RISING MAINS and a PUMPING STATION.

Experienced contractors should apply for Tender documents to the Council's ENGINEER AND SURVEYOR, 88 Town Square, Basildon, by 14th OCTOBER, 1960.

Applications for documents should be accompanied by a deposit of £5 ss., which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn, and the return of all documents.

The Council does not bind itself to accept the lowest or any Tender.

THE URBAN DISTRICT COUNCIL OF ESTON.

PROVISION OF FENCING.

TRUNK ROAD RECREATION GROUND, SOUTH BANK.

FIXED-PRICE TENDERS are invited for the ERECTION of approx. 600 lin. yd. of WROUGHT-IRON FENCING at the ABOVE RECREATION GROUND.

Copies of the Bills of Quantities and Form of Tender may be obtained from N. C. HARRISON, A.M.I.C.E., M.I.Mun.E., Engineer and Surveyor, 246 Normanby Road, South Bank, Middlesbrough, on payment of a deposit of Two Guineas in respect of the documents, which will be refunded on receipt of a bona-fide Tender (not subsequently withdrawn) or the return of the documents before the date given below for the receipt of the Tenders.

Tenders, in plain sealed envelopes endorsed "Tender for Fencing," but not bearing any name or mark indicating the sender, must reach me by Noon on THURSDAY, the 13th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

T. MYRDDIN BAKER,
Clerk of the Council.

Council Offices,
Grange-on-Tees,
September, 1960.

WANDLE VALLEY JOINT SEWERAGE BOARD.

DISPOSAL OF SLUDGE.

The Wandle Valley Joint Sewerage Board invite TENDERS for the REMOVAL and DISPOSAL of LIME PRESSED SLUDGE CAKE, containing approx. one-third lime on a dry solids basis and dried digested sludge, for two years from 1st January, 1961.

Particulars and Form of Tender can be obtained from Mr. W. B. WIGNALL, Surveyor to the Wandle Valley Joint Sewerage Board, Bygrove Road, Colliers Wood, S.W.19, and the Tenders should be sent to the undersigned not later than 10 a.m. on SATURDAY, 22nd October, 1960.

HARRY MAY,
Clerk of the Board.

Disposal Works,
Bygrove Road,
Colliers Wood, S.W.19.

CONTRACTS

BUCKS. COUNTY COUNCIL.

AMERSHAM-BERKHAMSTED ROAD, A.416.
ROAD AND BRIDGEWORKS AT HOCKERIDGE ARCH,
ASHLEY GREEN.

TENDERS are invited for ROAD AND BRIDGEWORKS (approx. 550yd.) comprising Realigning and Widening of Carriageway and Bridge, including Earthworks, Kerbing, Channelling, Rolled Concrete Foundation, Tarmacadam Shaping, and Drainage Works: Armo Arch (length 8ft. 9in., span 12ft. 3in.), Brick-faced Mass Concrete Wing Walls, Spandrels, Brick Parapet, and ancillary works.
Drawings may be seen at the Offices of the County Surveyor, County Offices, Aylesbury, from whom Contract documents may be obtained on payment of a deposit of £2, returnable on receipt of a bona-fide Tender.
Tenders must be received by me by 10 a.m. on MONDAY, 31st October, 1960.
The Council do not bind themselves to accept the lowest or any Tender.

R. E. MILLARD,
Clerk of the Council.

County Hall,
Aylesbury.

DERBYSHIRE COUNTY COUNCIL.

BRIDGES AND HIGHWAYS DEPARTMENT.

NOTTINGHAM-DERBY-STOKE-ON-TRENT
TRUNK ROAD, A.52.

PORTWAY HEAD, SUDBURY-JUNCTION WITH
A.515—SURFACING.

TENDERS are invited for SUPPLYING and LAYING a HOT ROLLED ASPHALT REGULATING COURSE and a 1½in. compacted thickness WEARING COURSE. The works comprise Dual 24ft. Carriageways and Approach Roads thereto, and contain an area of approx. 8,200 sq. yd.
Form of Tender and Specification from the County Surveyor, County Offices, Matlock, Derbyshire.
Tenders, in plain sealed envelopes endorsed "Portway Head, Sudbury—Surfacing, B. and H.," to be delivered to the Clerk of the County Council, County Offices, Matlock, by 19th OCTOBER, 1960.
The Council does not bind itself to accept the lowest or any Tender.

S. MEHEW,
County Surveyor.

County Offices,
Matlock.

COUNTY BOROUGH OF WEST HAM.

EDUCATION COMMITTEE.

TENDERS are invited for the FOLLOWING in respect of West Ham Schools—

- School Books.
- Stationery.
- Drawing Requisites.
- Handwork and Individual Apparatus.
- Needlework Materials and Haberdashery.
- Laundry Work.

Period of one year commencing 1st Jan., 1961.

Period of six months commencing 1st Jan., 1961.

Forms of Tender, to be returned not later than 5th NOVEMBER, 1960, may be obtained from the undersigned.
No Tender will be received except in a plain sealed envelope, which bears the words "Tender for" but shall not bear any name or mark indicating the sender.

R. OPENSHAW,
Chief Education Officer.

Education Department,
95 The Grove,
Stratford, E.15.

BOROUGH OF ILFORD.

ILFORD BROADWAY REDEVELOPMENT.

PROPOSED SHOPS AND OFFICE BLOCK
STRUCTURAL WORKS.

THE CORPORATION invites TENDERS for the STRUCTURAL FOUNDATIONS and FRAMEWORK involved in the Construction of a Four-storey Block of Shops and Offices, together with a Two-level Car Park, Access Road, and Drainage System.
The work consists of Reinforced Concrete Foundations and Retaining Walls, Partly Cased Structural Steelwork Frame (Steelwork to be carried out by a nominated Sub-contractor), Reinforced Concrete Floors and Staircases, Mass Concrete Ramp, and all incidental works.
The Conditions of Contract and Drawings may be inspected, and the Special Conditions, Specification, Bill of Quantities, General Layout Drawings and Form of Tender obtained on application in writing to the Borough Engineer and Surveyor, Town Hall, Ilford.
Applications must be accompanied by a deposit of Five Guineas, which is returnable upon receipt of a bona-fide Tender, not subsequently withdrawn.
Sealed Tenders, in an envelope which will be provided, bearing no indication of the tenderer and endorsed "Tender for Ilford Broadway Redevelopment—Proposed Shops and Office Block—Structural Works," must be delivered to the TOWN CLERK, Town Hall, Ilford, not later than 4 p.m. on TUESDAY, 25th October, 1960.
The Corporation does not bind itself to accept the lowest or any Tender.

WITHAM URBAN DISTRICT COUNCIL.
HOWBRIDGE ROAD DEVELOPMENT.
ROADS AND SEWERS.

TENDERS are invited for the CONSTRUCTION of ROADS, SEWERS, Manholes and other incidental works at the ABOVE ESTATE, comprising approx. 2,910 sq. yd. of Carriageway, Lean-mix Concrete Base and Gravel Asphalt Surfacing; 2,419 sq. yd. of Footways and Vehicular Crossings; 3,944 sq. yd. of Verges and Open Spaces; 2,092 lin. yd. of Sewers, 30in. dia. to 6in. dia.; 47 Precast Concrete Manholes. Specification, Bill of Quantities and Tender documents obtainable from the Engineer and Surveyor, Council Offices, Witham, Essex, upon payment of a deposit of Two Guineas (by cheque payable to the Witham U.D.C.), which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.
Tenders, enclosed in a plain sealed envelope endorsed "Tender for Roads and Sewers—Howbridge Road Development," must be returned to the undersigned not later than Noon on FRIDAY, 28th October, 1960.
The Council do not bind themselves to accept the lowest or any Tender.

H. CROOK,
Clerk of the Council.

Council Offices,
Collingwood Road,
Witham, Essex.

CONTRACTS

BOROUGH OF SOUTHGATE.

DEMOLITION OF 35 PROPERTIES AT
NEW SOUTHGATE.

TENDERS are invited from specialist firms for the DEMOLITION of a BLOCK of 35 RESIDENTIAL DWELLINGS in New Southgate, including the Disposal of all Materials.
Contractors wishing to tender should make written application to the Borough Engineer and Surveyor for the relevant documents. Drawings and General Conditions of Contract may be inspected at the Town Hall, N.13, during normal office hours.
Sealed Tenders must be received by the undersigned not later than 12 Noon on TUESDAY, 25th October, 1960.
The Council do not bind themselves to accept the lowest or any Tender.

GORDON H. TAYLOR,
Town Clerk.

Southgate Town Hall,
Palmer's Green, N.13.
5th October, 1960.

BOROUGH OF STRATFORD-UPON-AVON.

SEWERAGE AND SEWAGE DISPOSAL WORKS
EXTENSIONS.

Civil engineering contractors wishing to be included in the list of firms to TENDER for the UNDERMENTIONED CONTRACTS are invited to submit their names, together with details of similar contracts completed or in hand, stating the values of these contracts and the authorities concerned, to whom reference may be made, to the undersigned by TUESDAY, 1st November, 1960.

CONTRACT No. 1.—Sewerage.—Approx. 8,500 lin. yd. of Concrete and Glazed Ware Sewers (diameters varying between 9in. and 36in.), Improvements to existing Sewers, Storm Overflows, etc.

CONTRACT No. 2.—Main Sewage Pumping Station.—New Pumping Station, approx. 65ft. x 25ft. x 26ft. deep, and Screen House, approx. 2,200 lin. yd. 21in. dia. Cast-Iron Rising Main, including Two River Crossings.

CONTRACT No. 3.—Extensions to and Reconstruction of Sewage Disposal Works, including Detritor, Four Circular R.C. Tanks, Eight Circular R.C. Filter Beds, Prestressed Concrete Primary and Secondary Digesters, Sludge Drying Beds, Land Treatment Area, Recirculation Pumping Station and Administration Building, Laboratory and Workshop, etc.

P. C. SMART, M.I.C.E., M.I.Mun.E.,
Borough Engineer and Surveyor.

Municipal Offices,
Rother Street,
Stratford-upon-Avon.
29th September, 1960.

CITY OF PETERBOROUGH.

REPAINTING OF 1,600 LAMP COLUMNS.

TENDERS are invited for the ABOVE. Documents from City Engineer, £2 deposit. Closing date, 26th OCTOBER, 1960.

C. PETER CLARKE,
Town Clerk.

Town Hall,
Peterborough.

CITY OF MANCHESTER.

SOUTHMOOR ROAD AND HOLLYHEDGE ROAD
EXTENSION.

ROAD AND SEWER.

TENDERS are invited for the CONSTRUCTION of 3,800 sq. yd. of BITUMINUS MACADAM CARRIAGEWAY, 2,950 sq. yd. of SAND CARPET FOOTPATH, and 570 lin. yd. of 6in. and 9in. SEWER.
Tender documents, returnable by MONDAY, 31st October, 1960, are obtainable from the CITY SURVEYOR, (Room 208), Town Hall, Manchester, 2.

EAST DEREHAM URBAN DISTRICT COUNCIL.

FOUL AND SURFACE WATER SEWERS—
COMMERCIAL ROAD.

TENDERS are invited for the FOLLOWING:—
(1) Re-laying 130 lin. yd. of 12in. dia. G.S.W. Pipes in Spun-iron, with a possible Extension of 196 lin. yd. Depth not exceeding 25ft.
(2) Laying 303 lin. yd. of 6in. dia. Surface Water Sewers. Depth not exceeding 5ft.
(3) Manholes and ancillary works.
Bills of Quantities, Specification and Plan may be obtained from the Engineer and Surveyor to the Council on deposit of £2, which is returnable on receipt of a bona-fide Tender.
Tenders, endorsed "Commercial Road Sewer," should be delivered to the undersigned in a plain sealed envelope, not later than 25th OCTOBER, 1960.
The Council do not bind themselves to accept the lowest or any Tender.

IVOR G. WINN,

Clerk of the Council.

Assembly Rooms,
Dereham,

Norfolk.

29th September, 1960.

NORTH DEVON WATER BOARD.

CONTRACT NO. 63D.

CONSTRUCTION OF BRATTON DOWN SERVICE
RESERVOIR.

TENDERS are invited from experienced contractors for the CONSTRUCTION of a REINFORCED CONCRETE COVERED SERVICE RESERVOIR, with Earthen Embankments, to contain 750,000 gallons, and other ancillary works in connection therewith, at Bratton Down in the Parish of Bratton Fleming, at a point approx. 7½ miles north-east of Barnstaple.
Copies of the Specification, Bill of Quantities and Form of Tender may be obtained from the Engineers, MESSRS. ROPE AND RAFFETY, 9 Brewer's Green, Buckingham Gate, Westminster, S.W.1, upon payment (by cheque only) of Two Guineas deposit, which will be repaid upon the receipt of a bona-fide Tender and the return of all documents and Drawings supplied.

The Contract Drawings may be inspected at the Office of the Engineers or at the Office of the Chief Engineer (North), North Devon Water Board, Grenville House, Bouthport Street, Barnstaple.
Tenders, in plain sealed envelope endorsed "Tender for Contract No. 63D" will be sent to the undersigned not later than 12 Noon on the 7th NOVEMBER, 1960.
The Board does not bind itself to accept the lowest or any Tender.

R. T. SHEARS,
Clerk to the Board.

4 Barnfield Crescent,
Exeter.

CONTRACTS

COUNTY BOROUGH OF HALIFAX.

CONCRETE FENCE AT CLOUGH FARM, MIXENDEN.

TENDERS are invited for the SUPPLY and ERECTION of 230 lin. yd. of CONCRETE POST and PANEL FENCING, height 3ft. 9in. The panels are to be of the weatherboard type and buff coloured.
Details from the Borough Engineer, Crossley Street, Halifax.
Tenders are to be delivered to the undersigned by FRIDAY, 14th October, 1960.

RICHARD de Z. HALL,
Town Clerk.

Town Hall,
Halifax.

MIRFIELD URBAN DISTRICT COUNCIL.

WOODWORKING MACHINE.

TENDERS are invited for the SUPPLY of a WOODWORKING MACHINE. Copies of the Specification may be obtained from the undersigned, to whom the Tenders, in plain sealed envelopes, endorsed "Woodworking Machine," must be delivered not later than 21st OCTOBER, 1960.

J. E. COWDELL,
Clerk of the Council.

Council Offices,
Mirfield.

NEWTON ABBOT RURAL DISTRICT COUNCIL.

STREET LIGHTING—GROUP "B."

TENDERS are invited for the SUPPLY of up to 10 FLUTED STEEL COLUMNS and BRACKETS, LANTERNS and TIME SWITCHES for Group "B" Lighting Units.
Specifications and Form of Tender can be obtained from the Engineer and Surveyor at this Office, and should be returned to the undersigned not later than TUESDAY, the 18th October, 1960.
The Council do not bind themselves to accept the lowest or any Tender.

W. SADLER,
Clerk of the Council.

Council Offices,
Kingsteignton Road,
Newton Abbot.

1st October, 1960.

NEWTON ABBOT RURAL DISTRICT COUNCIL.

STREET LIGHTING—KINGSKERSWELL—GROUP "A."

TENDERS are invited for the SUPPLY, ERECTION and COMMISSIONING of 61 Group "A" LIGHTING UNITS, complete with Columns and Lanterns.
Plans may be seen at, and the Specification and Bill of Quantities with Form of Tender obtained from, the Engineer and Surveyor at this Office on payment of a deposit of £2 2s., by cheque made payable to the Newton Abbot Rural District Council. The deposit will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes, endorsed "Traffic Route—Street Lighting—Kingskerswell," to be delivered to the undersigned not later than TUESDAY, the 18th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. SADLER,
Clerk of the Council.

Council Offices,
Kingsteignton Road,
Newton Abbot.

1st October, 1960.

NEWTON ABBOT RURAL DISTRICT COUNCIL.

SEWERAGE—WARE FARM, KINGSTEIGNTON

FIXED-PRICE TENDERS are invited from experienced civil engineering contractors for the PROVISION and LAYING of about 780 lin. yd. of 6in. and 9in. dia. FOUL WATER SEWERS.

Plans may be seen at, and the Specification and Bill of Quantities with Form of Tender obtained from, the Engineer and Surveyor at this Office on payment of a deposit of £2 2s., by cheque made payable to the Newton Abbot Rural District Council. The deposit will be refunded on receipt of a bona-fide Tender, not subsequently withdrawn.
Tenders, in plain sealed envelopes, endorsed "Ware Farm Sewerage Scheme," to be delivered to the undersigned not later than TUESDAY, the 18th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

W. SADLER,
Clerk of the Council.

Council Offices,
Kingsteignton Road,
Newton Abbot.

1st October, 1960.

WITNEY RURAL DISTRICT COUNCIL.

WATER SUPPLY OF NORTH LEIGH,
HANDBOROUGH AND FREELAND.

W.22/19 CONTRACT 3.

TO CIVIL ENGINEERING AND PUBLIC WORKS
CONTRACTORS.

The above Council are prepared to receive TENDERS from experienced contractors for the CONSTRUCTION of approx. 5½ miles of 6in. and 4in. dia. ASBESTOS-CEMENT WATER MAINS, the Construction of a Booster Station, and other ancillary work. Particulars and Specifications may be obtained, and Plans may be inspected, at the Offices of the Council's Consulting Engineers, MESSRS. HOWARD HUMPHREYS AND SONS, West Street, Epsom, Surrey, on and from Monday, 10th October, 1960, until Friday, 4th November, 1960, between the hours of 10 a.m. and 4 p.m., upon the payment of a deposit of Five Guineas by cheque made payable to the Witney Rural District Council, which deposit, after the Council has reached a decision, will be returned to each contractor who has submitted a bona-fide Tender which had not subsequently been withdrawn and has returned all documents and Drawings.

Tenders are to be on the official form and are to be delivered to the undersigned, in sealed envelopes endorsed "Tenders for Water Supply of North Leigh, Handborough and Freeland (W.22/19 Contract 3)," but bearing no name or other mark indicating the sender, not later than Noon on MONDAY, 14th November, 1960.
The Council do not bind themselves to accept the lowest or any Tender.

ERNEST ROWLES,
Clerk to the Council.

Witney R.D.C.,
Hillside,
Witney, Oxon.
October, 1960.

CONTRACTS

COUNTY BOROUGH OF NORTHAMPTON.

TENDERS invited, by 10 a.m., 28th OCTOBER, for the RECONSTRUCTION of approx. 600 lin. yd. of WELFORD ROAD, including Surfacing, Drainage, and ancillary works.

Contractors wishing to tender should apply to Borough Engineer, Guildhall, Northampton, enclosing crossed cheque (payable to Northampton Corporation) for £2 2s., returnable if a bona-fide Tender is received and not subsequently withdrawn.

C. E. VIVIAN ROWE,
Town Clerk.

BOROUGH OF DAGENHAM.

RAINHAM ROAD SOUTH, B.178—WIDENING AND IMPROVEMENT FROM DAGENHAM EAST STATION TO WANTZ CORNER.

TENDERS are invited for WORKS consisting of the LAYING of approx. 16,000 sq. yd. of REINFORCED CONCRETE and BITUMINOUS MACADAM CARRIAGEWAYS, SUB PAVED FOOTWAYS, KERBING, SURFACE WATER DRAINAGE, and ancillary works.

Forms of Tender, Specification and Bills of Quantities may be obtained from, and Plans inspected at, the Office of the Borough Engineer and Surveyor, Civic Centre, Dagenham, on payment of a deposit of £3 3s., refundable on receipt of a bona-fide Tender.

Tenders to be returned in envelopes bearing no external indication of the sender's identity, endorsed "Tender for Widening of Rainham Road South," to me by 31st OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

KEITH LAUDER,
Town Clerk.

Civic Centre,
Dagenham.

BOROUGH OF ROMFORD.

PROVISION OF BUS LAY-BY AND PART RECONSTRUCTION RUSH GREEN ROAD (A.124).

TENDERS are invited for the FOLLOWING—

- Provision of Bus Lay-by, comprising approx. 125 sq. yd. of 8 in. thick Reinforced Concrete Slab, Taking up and Re-laying 60 lin. yd. Granite Kerb, Taking up and Re-lay 300 sq. yd. Slab Paving, together with various ancillary works.
- Breaking out and Reconstructing approx. 1,000 sq. yd. 10 in. thick Reinforced Concrete Carriageway, together with various ancillary works.

Contract documents obtainable from Borough Engineer and Surveyor, Town Hall, Romford, on deposit of cheque for £2 2s., returnable on receipt by me of bona-fide Tender, in envelope provided, by MONDAY, 24th October, 1960.

JOHN E. SYMONS,
Town Clerk.

Town Hall,
Romford.

BOROUGH OF BEBINGTON.

MAIN SEWERAGE—CONTRACT NO. 8.

BOREHOLE SURVEY—BROMBOROUGH AREA.

TENDERS are invited from experienced contractors for the EXPLORATORY TAKING of approx. 500 lin. ft. of 4 in. dia. BORES in 31 BOREHOLES in order to verify for design purposes the existing substrata.

The Specification, Bill of Quantities and Form of Tender may be obtained on application to the Borough Engineer and Surveyor, Town Hall, Bebington, Cheshire, at whose Office the Conditions of Contract and Contract Drawings may be inspected.

Tenders, in plain sealed envelopes endorsed "Tender—Main Sewerage Contract No. 8—Borehole Survey," should be returned to the undersigned not later than 12 Noon on WEDNESDAY, 26th October, 1960.

The Council does not bind itself to accept the lowest or any Tender.

G. CHAPPELL,
Town Clerk.

Town Hall,
Bebington, Ches.

CITY OF CAMBRIDGE.

COMMITTEE FOR EDUCATION.

REDECORATION OF EDUCATIONAL BUILDINGS.

TO BUILDERS, PAINTERS AND DECORATORS.

It is intended to CARRY OUT EXTERNAL AND INTERNAL REDECORATIONS of a NUMBER OF SCHOOLS during 1961.

Contractors who wish to TENDER for any or all of these Contracts should submit their names not later than Friday, 28th October, 1960, to the City Surveyor, Guildhall, Cambridge, who will in due course issue to applicants a list of the schools, Specifications and General Conditions.

M. M. SCARR,
City Education Officer.

The Guildhall,
Cambridge,
28th September, 1960.

CANNOCK URBAN DISTRICT COUNCIL.

HIGHWAY WORKS—1960/61.

TENDERS are invited for the EXECUTION of VARIOUS CARRIAGEWAY AND FOOTWAY WORKS on TRUNK, COUNTY AND DISTRICT ROADS, including the following approx. quantities: 2½ in. Concrete Flagging (750 sq. yd.); 4 in. Lean Concrete Base (750 sq. yd.); Fine Cold Asphalt Footway Surfacing (7,120 sq. yd.); 5 in. x 10 in. Concrete Kerb, Channel and Carriageway Haunch (2,070 lin. yd.); 5 in. x 10 in. Concrete Kerb only (2,060 lin. yd.); Re-lay Existing Kerb (470 lin. yd.); Concrete Edging (2,860 lin. yd.); Set Channels (860 lin. yd.).

Bills of Quantities, Specification, etc., may be obtained from the Borough Engineer and Surveyor, MR. E. LOMAX, A.M.I.C.E., M.I.Mun.E., Council House, The Green, Cannock, at whose Office the Conditions of Contract and relevant Drawings may be inspected during normal office hours.

Tenders, in plain sealed envelopes endorsed "Highway Works, 1960/61," but bearing no mark to indicate the name of the sender, must reach the undersigned before 12 Noon on MONDAY, 17th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

H. C. ALLEN,
Clerk of the Council.

Council House,
The Green,
Cannock, Staffs.
30th September, 1960.

CONTRACTS

HUCCLECOTE, GLOUCESTER.

TENDERS are invited for the CONSTRUCTION of approx. 1,200 yd. of ESTATE ROAD WORKS, excluding surfacing, together with Storm and Foul Water Sewers and Outfalls, and the normal appurtenances. Plans and Specification and Tender Form may be obtained by application to the following address on or before the 15th OCTOBER.

Vulcan House,
Vulcan Road,
Solihull.

NEWBOROUGH ESTATES, LTD.

For Contracts received too late for
classification see page 65

APPOINTMENTS VACANT

DURHAM COUNTY COUNCIL.

COUNTY SURVEYOR'S DEPARTMENT.

PERMANENT TECHNICAL POSTS are available for a few suitable men as JUNIOR ENGINEERING ASSISTANTS on Grades up to, and including, the Special Grade (£785-£1,070 per annum).

Applications will be welcomed from University Graduates in Civil Engineering. Promotion to the Special Grade is automatic on obtaining qualifications and subject to satisfactory service. It is also the policy of the County Council to promote internally to fill vacancies for Senior Engineering Assistants on A.P.T. IV and above wherever possible.

Successful candidates will be able to obtain valuable experience on road and bridge design and soil survey in connection with preparation and execution of major improvement schemes, including a large new motorway project, over 30 miles in length, for which the County Council are to act as agents for the Ministry of Transport.

Rented housing accommodation at the New Town of Newton Aycliffe, in congenial surroundings, is normally available. Day release facilities and financial assistance are given to officers wishing to continue their studies in order to complete their final professional qualifications.

Further information on the organisation of the Department, and Application Forms and Conditions, obtainable from the County Surveyor, Aycliffe Heads, Durham.

J. K. HOPE,
Clerk of the County Council.

Shire Hall,
Durham,
21st September, 1960.

BOROUGH OF BURY ST. EDMUNDS.

MAIN OUTFALL SEWER.

APPOINTMENT OF RESIDENT ENGINEER.

APPLICATIONS are invited by the Council from persons of considerable experience for the APPOINTMENT OF RESIDENT ENGINEER.

The work entails the laying of a large-diameter outfall sewer along the river valleys, together with a section of tunnel and ancillary works. The salary offered is £1,100 per annum, and consideration will be given to additional expenses in connection with subsistence allowance. The appointment is temporary, but will be for a minimum period of three years.

The person appointed will be responsible to the Borough Engineer and Surveyor, G. S. STANLEY, A.M.I.C.E., M.I.Mun.E., to whom applications, giving full details of experience, age and qualifications, together with the names and addresses of three referees, should be sent not later than 3rd NOVEMBER next.

RICHARD R. HILES,
Town Clerk.

Borough Offices,
Bury St. Edmunds.

CITY OF CARDIFF.

CORPORATION WATERWORKS.

LLANDEGFEDD WATER SCHEME—SECTION B.

APPLICATIONS are invited for the TEMPORARY APPOINTMENT (superannuable) of ASSISTANT RESIDENT ENGINEER, to be engaged upon the design and construction of river intake works, large pumping plants, large-diameter mains and treatment plant. Candidates should have experience of similar works, and preference would be given to Corporate Members of the Institution of Civil Engineers.

The commencing salary will be £1,250 per annum, subject to review on the progression of the works, and the Corporation are prepared to assist in the provision of housing accommodation in the area.

Further information on Conditions of Service concerning this appointment may be obtained from the Water Engineer and Manager, Municipal Offices, Greyfriars Road, Cardiff.

Applications, together with the names of two referees, should reach the undersigned, appropriately endorsed, not later than the 14th OCTOBER, 1960.

S. TAPPER-JONES,
Town Clerk.

City Hall,
Cardiff,
September, 1960.

CHEADLE AND GATLEY URBAN DISTRICT COUNCIL.

APPOINTMENT OF HIGHWAYS SUPERINTENDENT.

APPLICATIONS are invited from suitable persons for the ABOVE POSITION.

Applicants must have good experience relating to all highway and sewer construction and maintenance, and labour supervision. Previous service with a local authority will be an advantage. The salary will be within the Grade A.P.T. II (£765-£880), depending upon qualifications and experience, and applicants must hold a current driving licence. The nature of the duties of the post will call for hours of duty in excess of 44 hours per week, as conditions demand.

The position is subject to one calendar month's notice on either side. Applications, endorsed "Highways Superintendent," stating age, present and previous appointments, experience, and giving the names and addresses of two referees, must reach the undersigned not later than SATURDAY, 15th October, 1960.

The Council will consider the provision of housing accommodation.

RICHARD ROBERTS,
Clerk of the Council.

Town Hall,
Abey,
Cheshire,
22nd September, 1960.

APPOINTMENTS VACANT

A D E N.

SENIOR EXECUTIVE ENGINEER.

PROTECTORATE WORKS SERVICES.

Qualification: Candidates, aged 35-45, must be A.M.I.C.E.

Duties: To survey and advise on the public works requirements in the Aden Protectorate, and to plan and supervise the execution of approved schemes, including building and engineering.

Terms of Appointment: On contract for one tour of 18-24 months in the first instance, with gratuity on satisfactory completion of engagement of 12½ per cent. of aggregate salary drawn.

Salary: £2,015 per annum.

Free passages, generous leave, education and children's allowances.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name, age and brief details of qualifications and experience. Quote BCD.112/2/08.

COUNTY BOROUGH OF EAST HAM.

SENIOR ASSISTANT ENGINEER (GENERAL)—

GRADE III (£880-£1,065).

London Weighting is paid in addition. Salary in excess of the minimum may be paid according to qualifications and experience.

A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and Application Forms, returnable by 14th OCTOBER, 1960, from the TOWN CLERK, Town Hall, East Ham, E.6.

COUNTY BOROUGH OF EAST HAM.

ENGINEERING ASSISTANTS, A.P.T. I—SALARY

UP TO £805 PER ANNUM.

Subsistence allowances may be granted over a reasonable period to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and Application Forms, returnable by 14th OCTOBER, 1960, from the TOWN CLERK, Town Hall, East Ham, E.6.

BOROUGH OF WESTON-SUPER-MARE.

The COUNCIL is actively engaged on the construction of an extensive Main Drainage Scheme estimated to cost £1½m.

APPLICATIONS are invited from persons with appropriate qualifications and suitable engineering experience to fill the POST of ENGINEERING ASSISTANT on Special Grade, Salary £840-£1,145.

In addition to this salary, the Council pay an annual progress bonus which is approximately equivalent to an additional increment.

N.J.C. Service Conditions; post pensionable. Removal expenses repaid over a period of two years. Housing accommodation available.

Applications, on forms to be obtained from the BOROUGH ENGINEER, Town Hall, Weston-super-Mare, to arrive by MONDAY, 24th October, 1960.

BOROUGH OF BEXLEY.

CLERK OF WORKS.

Salary up to £20 per week, according to experience. The appointment is temporary (approx. nine months in the first instance) and subject to one month's notice on either side.

Applicants must have had experience in supervising the construction under contract of surface water sewerage and roadworks, including setting-out, measuring-up, keeping records, etc.

Forms of Application and Conditions of Appointment are obtainable from the Borough Engineer, West London, Broadway, Bexleyheath, Kent, to whom completed applications must be returned by 15th OCTOBER, 1960.

Canvassing will disqualify.

ARTHUR GOLDFINCH,
Town Clerk.

CITY OF CARDIFF.

CORPORATION WATERWORKS.

APPOINTMENTS OF ENGINEERING ASSISTANTS.

APPLICATIONS are invited for the FOLLOWING PERMANENT APPOINTMENTS:

- Mechanical Engineering Assistant—Grade A.P.T. IV.
- Graduate Engineering Assistant—Grade A.P.T. I.

Candidates for post (a) must be suitably qualified, preference being given to Corporate Members of the Institution of Mechanical Engineers, and should have had experience of pumping installations and plant maintenance.

Candidates for post (b) must have passed Parts "A" and "B" of the Examination of the Institution of Civil Engineers, or possess a University degree in Civil Engineering.

General Conditions of Appointment can be obtained from the Water Engineer and Manager, Municipal Offices, Greyfriars Road, Cardiff, and applications, stating age, previous experience, and qualifications, together with the names of two referees, should reach the undersigned, in envelopes appropriately endorsed, on or before the 14th OCTOBER, 1960.

S. TAPPER-JONES,
Town Clerk.

City Hall,
Cardiff,
September, 1960.

WEAR AND TEES RIVER BOARD.

SENIOR ASSISTANT ENGINEER—A.P.T. GRADE IV

(£1,065-£1,220 P.A.).

APPLICATIONS are invited for the ABOVE VACANCY from qualified Engineers. The commencing salary will be fixed in accordance with experience and qualifications. The successful candidate will be required to provide and maintain a car not exceeding 10-h.p. (1,199 c.c.), with N.J.C. Essential Users' Allowances. Assistance in the purchase will be given if required.

The appointment is pensionable and will be subject to the Local Government Superannuation Act, 1953, and to medical examination.

Application forms are obtainable from the Chief Engineer, MR. C. CLAY, B.Sc., A.M.I.C.E., at this address, and should be returned to him not later than 15th OCTOBER, 1960.

J. E. LAVEN,
Clerk and Chief Financial Officer.

Greencroft East,
158 Coniscliffe Road,
Darlington.

APPOINTMENTS VACANT

HERTS. COUNTY COUNCIL.

A HIGHWAYS ASSISTANT IS REQUIRED on Misc. Grade IV/V (£625-£760 p.a.). Candidates will be required to assist the Divisional Surveyor in the supervision of roadworks carried out by contract or direct labour. A knowledge of surveying and levelling would be an advantage.

The appointment is in the Western Highways Division, and the person appointed will be required to live in the vicinity of Watford or Hemel Hempstead, and should be able to drive a car or motor-cycle (allowance payable).

Post pensionable. The commencing salary will be commensurate with the age and experience of the successful applicant.

Applications, giving age, details of education and experience, together with the names of two referees, to COUNTY SURVEYOR, County Hall, Hertford, by 14th OCTOBER.

METROPOLITAN BOROUGH OF LEWISHAM.

ASSISTANT ENGINEER—Salary Scale £645-£815 p.a. (A.P.T. I) or £840-£1,145 p.a. (Special Scale), according to qualification.

The above salary figures are those of a new award which is subject to confirmation. London Weighting, varying between £15-£40 p.a., according to age, is payable in addition to above Scales.

Further particulars and Form of Application from the TOWN CLERK (Dept. J), Lewisham Town Hall, London, S.E.6.

Closing date: 20th OCTOBER, 1960.

BOROUGH OF CHORLEY.

APPOINTMENT OF SENIOR ENGINEERING ASSISTANT.

Applications are invited for the ABOVE-MENTIONED APPOINTMENT in the Borough Engineer's Department at a salary within Grades A.P.T. III to the Special Grade, according to qualifications and experience. The National Scheme of Conditions of Service and the Superannuation Acts apply.

The Council will consider provision of housing accommodation for the successful applicant if required.

Applications, stating age, qualifications and experience, with copies of two recent testimonials, must be received by the undersigned not later than the 17th OCTOBER, 1960.

ROBERT POTTER, Town Clerk.

Town Hall, Chorley.

27th September, 1960.

MATLOCK URBAN DISTRICT COUNCIL.

DARLEY DALE SEWERAGE.

APPOINTMENT OF—(1) RESIDENT ENGINEER, and (2) ASSISTANT CLERK OF WORKS.

Applications are invited for the ABOVE APPOINTMENTS to supervise the laying of concrete, salt glazed ware and cost-iron sewers, the construction of four sewage pumping stations, and the installation of machinery, under the direction of the Council's Consulting Engineers, MESSRS. W. H. RADFORD AND SON.

The salary of the Resident Engineer will be £1,250 per annum, and housing accommodation will be made available if required.

Applicants must have been trained as Civil Engineers and have had experience in this type of work, which includes deep excavations, reinforced concrete structures, pressure pipelines, river crossings, etc. They should be thoroughly conversant with the duties of a Resident Engineer, including testing materials, pipelines and water-retaining structures, checking the setting-out of works, checking reinforcement, measuring the works, keeping records, reporting progress, dealing with contractors' accounts, and dealing with public utility undertakers and other third parties.

The salary of the Clerk of Works will be £900 per annum. Applicants should have had experience on similar works and be generally capable of carrying out the duties listed above.

The appointments are expected to start in January, 1961, and to last for approx. two years.

Applications for either post, stating age, qualifications and experience, and the names of three persons to whom reference may be made, must be delivered to the undersigned not later than Noon on MONDAY, 24th October, 1960.

J. OWEN HUNT, Solicitor and Clerk of the Council.

Town Hall, Matlock, Derby.

28th September, 1960.

RURAL DISTRICT COUNCIL OF GLOUCESTER.

UPTON ST. LEONARDS SEWERAGE SCHEME.

APPOINTMENT OF RESIDENT ENGINEER.

Applications are invited for this APPOINTMENT and should reach the undersigned not later than WEDNESDAY, 19th October, 1960, giving full particulars of previous experience of sewage disposal works construction, date when free salary required, etc., together with copies of two recent testimonials.

The appointment is of a temporary nature, for a period of approx. 12 months. A motor car is not essential.

W. J. KNIGHT, Clerk to the Council.

29 Brunswick Square, Gloucester.

29th September, 1960.

UPPER WITHAM INTERNAL DRAINAGE BOARD.

GENERAL FOREMAN.

Applications are invited for the ABOVE POSITION, duties to include the supervision of drain maintenance works by direct labour and contract within the Board's area of 44,000 acres, together with inspection of land drainage pumping stations and control structures.

A salary of £15 per week will be paid, and previous experience on land drainage works would be an advantage. Transport will be provided by the Board, and the successful applicant will be required to reside in or near Lincoln. A house is available on a service tenancy if required.

Application Forms are available from the undersigned, and must be completed and returned not later than SATURDAY, 22nd October, 1960.

J. BARNATT, A.M.I.C.E., Engineer to the Board.

39 St. Catherine's, Lincoln.

APPOINTMENTS VACANT

ROYAL COUNTY OF BERKSHIRE.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS on the STAFF of the COUNTY SURVEYOR:

(1) Traffic Engineer—A.P.T. Grade IV (£1,140-£1,310).

(2) Senior Assistant Engineer—Ditto.

(3) Inspector of Works (Bridges)—A.P.T. Grade II (£815-£960).

For post (1) applicants should be suitably qualified and have had experience in highway design and construction, as well as traffic engineering. The commencing salary will be within the grade in accordance with qualifications, training and experience.

For post (2) applicants must be qualified Engineers and have had experience in bridge design and construction.

For post (3) applicants should be suitably qualified, and is required for the design of bridges and the supervision of small bridge repair contracts.

All three posts are located at Head Office, Reading, and will carry the option of an Essential User car allowance or accepting a Council-owned car on approved conditions.

Forms of Application obtainable from, and returnable to, the COUNTY SURVEYOR, Shire Hall, Reading, not later than MONDAY, 24th October, 1960.

FLINTSHIRE COUNTY COUNCIL.

APPLICATIONS are invited from suitably qualified and experienced persons for the FOLLOWING APPOINTMENTS in the County Surveyor's Department, Mold:

(a) Private Street Works Assistant—A.P.T. III (£960-£1,140 p.a.).

(b) Engineering Assistant—Special Grade (£840-£1,145 p.a.).

(c) Junior Engineering Assistant—A.P.T. I (£645-£815 p.a.).

Applicants for (a) should have some experience in Private Street Works and in the application of the New Streets Act; and for (a) and (b) should preferably be University graduates or have passed the Final Examination of the Institution of Civil Engineers or the Institution of Municipal Engineers. (c) should have experience in surveying and in the preparation of plans for roadworks and bridgeworks.

Application Forms from the CLERK, County Buildings (P.O. Box No. 1) Mold.

Closing date: 17th OCTOBER, 1960.

BOROUGH OF WORTHING.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS in the Borough Engineer's Department on Grade A.P.T. IV, i.e., £1,140-£1,310 p.a.:

(a) Two Senior Assistant Architects—Candidates must have passed the Final Examination of the R.I.B.A., or its equivalent, at a recognised school of architecture.

(b) Senior Assistant Engineer—Candidates must be subject to the National Scheme of Conditions of Service of Local Government Officers, to the provisions of the Local Government Superannuation Acts; and to the successful candidates passing satisfactorily a medical examination.

Applications, stating age, qualifications, experience, present and past appointments, with dates, and accompanied by copies of three testimonials, should be sent to the Borough Engineer and Surveyor, Town Hall, Worthing, not later than 17th OCTOBER, 1960.

ERNEST G. TOWNSEND, Town Clerk.

CATERHAM AND WARLINGHAM URBAN DISTRICT COUNCIL.

APPOINTMENT OF TEMPORARY CLERK OF WORKS.

Applications are invited for the APPOINTMENT of a TEMPORARY CLERK OF WORKS for a period of 12 months, with a weekly wage of £16.

The person appointed will be required to supervise the construction of buildings and road and sewer works by contract and must have a sound knowledge of building and road construction and the trades involved.

Applications, giving details of age, present appointment and previous experience, together with the names of two referees, must be submitted to the Engineer and Surveyor not later than 4 p.m. on the 19th OCTOBER, 1960.

B. J. SMERDON, Clerk of the Council.

Council Offices, Caterham.

BIRMINGHAM TAME AND REA DRAINAGE BOARD.

CIVIL ENGINEERS.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS on the STAFF of the Engineer to the Board, M. R. VINCENT DAVISS, B.Sc., M.I.C.E., at Rookery Park, Edgbaston, Birmingham. The Board is engaged upon design and construction programmes amounting to £15m.

Senior Assistant Engineers—A.P.T. Grade V (£1,220-£1,375)—one appointment on temporary establishment.

A.P.T. Grade IV (£1,065-£1,220)—one appointment on temporary establishment.

Applicants should be Corporate Members of the Institution of Civil Engineers, experienced in sewage purification works and/or structural design, and capable of leading a design team.

Assistant Engineers—A.P.T. Grade III (£880-£1,065)—five appointments on temporary or permanent establishments.

Junior Assistant Engineers—A.P.T. Grade II (£765-£880)—one appointment on temporary establishment.

Applicants should either (a) have completed professional training and have passed Parts I and II of the Associate Membership Examination of The Institution of Civil Engineers, or (a) hold a Degree in Civil Engineering, and, in the case of Assistant Engineers, have at least two years' experience subsequent to obtaining such qualification.

Appointments will, initially, be within the Design Offices, but opportunities will be given for gaining site experience.

Applications, stating age, qualifications, details of training and experience, and the names and addresses of two referees, should reach the undersigned not later than First Post on WEDNESDAY, 26th October, 1960.

ARTHUR J. WRIGHT, Clerk to the Board.

Clerk's Office, Lombard House, Great Charles Street, Birmingham, 3.

29th September, 1960.

APPOINTMENTS VACANT

STATES OF JERSEY.

SEWERAGE BOARD.

APPLICATIONS are invited for the APPOINTMENT in the Consultant Engineer's Office of an ASSISTANT CIVIL ENGINEER for the design of sewers and pumping stations.

Commencing salary will be in the range £810-£950 per annum.

Appointments are temporary, terminable by one month's notice on either side, but anticipated duration is at least two years.

The States of Jersey does not undertake to provide housing accommodation.

Applications, giving full details of training, qualifications, present and previous appointments, stating age, and whether married or single, and enclosing copies of testimonials, should be delivered to the undersigned as soon as possible.

(Signed) S. AVERILL GOTHARD, B.Sc., M.I.C.E., Hon. M.Inst.S.P., Consultant Engineer.

Public Health Offices, South Hill, St. Helier, Jersey.

DROYSDEN URBAN DISTRICT COUNCIL.

RESIDENT ENGINEER.

APPLICATIONS are invited for the APPOINTMENT of a RESIDENT ENGINEER for the supervision of the construction of new sewers, under the direction of the Council's Consulting Engineers, MESSRS. W. HERBERT BATEMAN AND PARTNERS.

The work comprises the construction of approx. 2,800 lin. yd. of new main sewer varying in size from 24in. to 45in. dia., in built-up areas, mainly in tunnel, and also the culverting of approx. 600 lin. yd. of an existing open stream with pipes varying in size from 30in. to 54in. dia. The duration is expected to be about two years.

Candidates for the appointment are required to have had considerable experience of sewer construction and of work in tunnel.

The salary for the appointment is £1,200 p.a. and the appointment is subject to one month's notice on either side.

Applications for the appointment, endorsed "Resident Engineer," giving full particulars of the candidate's age, experience, present appointment, and stating when free, together with copies of three testimonials, or the names of three referees, should be submitted to the undersigned not later than 22nd OCTOBER, 1960.

G. S. HEPTON, Clerk of the Council.

Council Offices, Droydsden, Lancs.

WYCOMBE RURAL DISTRICT COUNCIL.

APPOINTMENT OF CLERK OF WORKS.

PENN AND TYLERS GREEN SEWERAGE SCHEME.

Applications are invited for the ABOVE APPOINTMENT at a salary of £880 p.a. plus a car allowance in accordance with the N.J.C. Scale for a car not exceeding 1,199 c.c. on an Essential User basis.

The Council will be prepared to assist in providing housing accommodation if necessary.

The appointment will be for a minimum of two years, and offers good practical experience for an Assistant interested in outside work and supervision of large contracts, as well as to those previously engaged as Clerks of Works to the Council.

Applicants must have had experience of similar works, be capable of levelling, setting-out, measuring, keeping records, testing, and of supervising construction works.

Applications, stating age, qualifications and experience, together with the names and addresses of two referees, must be forwarded to the Engineer and Surveyor, 8/9 Easton Street, High Wycombe, not later than FRIDAY, the 21st October, 1960.

L. C. RYSDALE, Clerk of the Council.

17 High Street, High Wycombe.

LONDON MASTER BUILDERS ASSOCIATION.

APPOINTMENT OF SECRETARY.

APPLICATIONS are invited for APPOINTMENT as SECRETARY of the ABOVE ASSOCIATION, which is the London Region of the National Federation of Building Trades Employers. He will be responsible, subject to the general authority of the Director, for the secretarial work in connection with the Council, Executive Committee and certain other Committees, and also for the general administration of the Association. It is desirable that the Secretary should have experience of a similar Employers' Organisation and of industrial negotiations, and he should preferably have a legal background.

The successful candidate should be available to take up his duties by 1st January, 1961. The commencing salary will be not less than £1,750 p.a., depending upon the qualifications and experience of the person selected. Superannuation provisions apply.

Persons interested should write by 14th October for full details of duties and for an Application Form which is returnable not later than 28th OCTOBER to the DIRECTOR at 47 Bedford Square, London, W.C.1, the envelope being marked "Secretary" in the top left-hand corner.

LONDON MASTER BUILDERS ASSOCIATION.

NATIONAL CONTRACTORS GROUP.

APPLICATIONS are invited for APPOINTMENT as SECRETARY OF THE NATIONAL CONTRACTORS GROUP OF THE ABOVE ASSOCIATION (which is the London Region of the National Federation of Building Trades Employers). He will be responsible, subject to the general authority of the Director, for work in connection with the Committees of the Group and for conducting its affairs. He may also be allocated certain other duties in the Association.

It is desirable that the Secretary should have experience of a similar organisation and have some technical background, but this is not essential.

The successful applicant, who should be between 30 and 45 years of age, will be expected to take up his duties as soon as possible. Commencing salary will be not less than £1,500 per annum, depending on qualifications and experience. Superannuation provisions apply.

Persons interested should write by 14th October for full details of duties and Application Form which is returnable not later than 28th OCTOBER to the DIRECTOR at 47 Bedford Square, London, W.C.1, the envelope being marked "N.C.G." in the top left-hand corner.

LONDON MASTER BUILDERS ASSOCIATION.

NATIONAL CONTRACTORS GROUP.

APPOINTMENTS VACANT

IMPERIAL ETHIOPIAN GOVERNMENT.

APPLICATIONS are invited for the POST of HIGHWAY CONSTRUCTION INSPECTOR under the Imperial Highway Authority, Ethiopia.

The candidate must be a qualified mechanic. He will be responsible for the repair, overhaul, inspection, maintenance and operation of heavy equipment and the supervision of workshops.

Salary—£1,715 by annual increments to £2,400 per annum.

Housing allowance, as appropriate, from £463 to £695 per annum.

The combined Ethiopian income tax on salary and housing allowance is £260 minimum to £460 maximum per annum. Contract for one or three years. Free passage for official on completion of contract. Family passages given only where three-year contract.

Applications, in writing, to Room 140, FOREIGN OFFICE, London, S.W.1.

DICK HAMPTON REQUIRES YOUNG ENGINEERS to measure earthwork quantities, assist Contracts Manager, and estimating. Permanent status in expanding, successful organisation.—**DICK HAMPTON, LTD.**, Broadview Farm, Blacknest, Alton, Hants. Tel.: Bentley 2241-2.

BUYER REQUIRED for head office of medium-sized, progressive building and civil engineering contractors operating mainly in the South-West. Applicants must have knowledge of B.O.Q., drawings and office routine, and should be employed elsewhere in a similar capacity, although consideration will be given to Assistant Buyers in a large organisation. Apply in strict confidence to the Managing Director, giving details of age, experience, and salary required, to **DEVON CONTRACTORS, LTD.**, Venny Bridge, Whipton, Exeter. Tel.: Exeter 66216/8.

EXPERIENCED SITE ENGINEERS/SURVEYORS REQUIRED by civil engineering contractors based in Hull. Fully experienced setting-out measuring, valuations and final accounts, and able to work with minimum supervision. Pension and life assurance scheme in operation. Excellent prospects for right man.—Write, giving full details, in strictest confidence, to **Box V.2745**, "The Contract Journal."

ASSISTANT QUANTITY SURVEYOR of intermediate to final standard, capable of taking-off and dealing with final accounts. Good opportunity for widening experience. Professional office, Westminster, 5-day week. Lunches with vouchers, pension scheme.—Write, stating experience and salary required, to **Box V.2753**, "The Contract Journal."

BRISTOL-BIRMINGHAM MOTORWAY BRIDGES SECTION

WILSON LOVATT AND SONS, LTD., invite applications from fully trained men for the following positions. Good terms and opportunity for advancement within the company's expansion programme.—

SITE ENGINEERS
SECTION FOREMAN
CARPENTER FOREMAN
STEELFIXER FOREMAN
GANGERS

Apply to:

Site Agent, Contractors' Office,
WILSON LOVATT AND SONS, LTD.,
Wychbold, near Droitwich, Worcestershire.

FIRM of national building contractors **REQUIRE** First-class **REINFORCED CONCRETE GENERAL FOREMAN** for work in Northern Area. Permanent and pensionable positions for right applicants.—Write to **Box L.L.398**, "The Contract Journal."

TOP-CLASS GENERAL FOREMAN REQUIRED for medium- and large-sized building contracts in Southern England. High-calibre man, with experience for good salary with bonus scheme in operation.—Apply to Personnel Manager, **T.G. CONSTRUCTION CO., LTD.**, Ettingshall, Wolverhampton.

QUANTITY SURVEYOR REQUIRED by civil engineering contractors, for permanent appointment at head office. This is a senior position and applicants must have wide experience of civil engineering and building work, with a knowledge of estimating.—Apply, giving full details of experience, to Managing Director, **THOMAS FLETCHER AND CO., LTD.**, Mansfield, Notts.

SENIOR SITE ENGINEERS REQUIRED for road-works and main drainage contracts in the Oxfordshire area. Salary range of £1,000/£1,250 p.a. Permanent and progressive post, with bonus scheme.—Write in confidence, stating age, full details of experience, and past employers, etc., to **Box V.2768**, "The Contract Journal."

CONTRACTS SUPERVISORS REQUIRED for building contracts in Southern England. Values of contracts range from £10m. to £1m. Permanent appointments with good prospects and top salary; bonus and superannuation schemes in operation. Applications to Personnel Manager, **T.G. CONSTRUCTION CO., LTD.**, Ettingshall, Wolverhampton.

YORKSHIRE PRESTRESSED CONCRETE MANUFACTURERS

Progressive prestressed and precast manufacturers **REQUIRE WORKS MANAGER**, preferably with knowledge of this industry, though not essential if applicant has proven record in the civil engineering industry. He must be a first-class organiser and administrator, capable of controlling labour and production to a highly competitive standard. Generous salary and car to the right man.—Write in first instance, giving age, qualifications, experience and indication of salary range, to:

BOX V.2764, "THE CONTRACT JOURNAL."

ASSISTANT ENGINEER/SURVEYOR REQUIRED for land surveys, design of roads and sewers, setting-out and supervision of construction by direct labour. Applicants should have received professional training and have had site experience. Age preferred, 25-35. Current driving licence essential. This is a new post in an expanding department and provides excellent prospects for the right man. Non-contributory pension scheme.—Applications in writing, stating age, qualifications, experience, and salary, to the Engineer and Surveyor, **A. J. WAIT AND CO., LTD.**, Wellington Crescent, New Malden, Surrey.

SITE MEASURING SURVEYORS REQUIRED for long-term contracts. State age, experience, and salary required, to Managing Director, **W. E. CHIVERS AND SONS, LTD.**, Devizes, Wilts. Tel.: Devizes 121.

APPOINTMENTS VACANT

TARMAC ROADSTONE, LTD., **REQUIRE OFFICE MANAGER** for surfacing department. Wolverhampton. Applicants should have good experience with surfacing or civil engineering contractors. Permanent position and superannuation scheme available. Surfacting Manager, Econmac House, Dunstall Road, Wolverhampton.

CONSULTING ENGINEERS in Westminster **REQUIRE ENGINEER** to take charge of site investigations and soil mechanics laboratory. The post offers excellent scope for a well-qualified, energetic man. Write full details to **Box V.2712**, "The Contract Journal."

CIVIL ENGINEERING CONTRACTORS REQUIRE ASSISTANT CIVIL ENGINEERS for North-West Scotland. Must be prepared to stay away from home. Attractive prospects. State experience and salary.—Write 1991, **Wm. Porteous and Co., Glasgow**.

ASSISTANT SURVEYOR

REQUIRED for the head office of building and civil engineering contractors in Westminster. Age 20-25. Applicants must be experienced in all phases of building surveying, from siting measuring to assisting with preparation of final accounts.—Apply in writing, giving age, complete details of training and salary required, to:

BOX V.2749, "THE CONTRACT JOURNAL."

ASSISTANT RESIDENT ENGINEER REQUIRED for long-term coke oven and bi-product contract in Yorkshire. Age 25/30 years. Graduate Civil Engineer or A.M.I.C.E. preferred. Must be interested in the construction of complete industrial plants, including structural steelwork, pipework, heavy vessels and refractory brickwork. Should be prepared to travel at the end of the present contract. This is a permanent staff appointment with pension rights, and carries good prospects. Salary will be in accordance with qualifications and experience.—Applications, quoting Ref. AR.115, in confidence, to Contract Labour Department, **SIMON-CARVES, LTD.**, Cheadle Heath, Stockport.

GENERAL FOREMEN (Building), Midlands area, for a leading building and civil engineering company with an expanding organisation. Must have carried out large-scale contracts, including concrete framed multi-storey structures. Able to adhere to progress schedules and be conversant with planning procedure. High salary, superannuation and profit-sharing scheme. Brief particulars to be sent in confidence to **J. Wright, Director, C. BRYANT AND SON, LTD.**, Small Heath, Birmingham, 10.

QUANTITY SURVEYOR

(Aged 28 to 35 years) **REQUIRED** urgently by City engineering firm with world-wide interests. Applicants should be fully experienced in all aspects of Q.S. work, with emphasis on civil engineering. Must be prepared to travel. A good salary, prospects and pension scheme above average. Pension fund and luncheon club facilities.—Write details age, training and experience:

(B.A.M./251).
BALFOUR, BEATTY AND CO., LTD.,
Bow Bells House,
Broad Street, Cheshire, London, E.C.4.

WORKS MANAGER REQUIRED to take complete charge of new concrete factory shortly to be opened by **ABERIAN BUILDING PRODUCTS, LTD.** in Lenwade, Norwich. Only first-class and experienced men need apply. The position offers great scope and remuneration commensurate with responsibility and experience.—Apply in first instance, in writing, giving full details, to Managing Director.

GENERAL FOREMEN REQUIRED, mainly reinforced concrete sewage disposal works, etc.—**KOTTLER AND HERON, LTD.**, Northampton.

SALES MANAGER REQUIRED. We wish to increase our sales still further in the Southern Counties and can offer a really progressive position to an individual who can produce good results. Naturally all applications will be treated in the strictest confidence.—**GREENHAM EQUIPMENTS, LTD.**, Clayton Road, Ruislip Road, Greenford, Middx.

SITE FITTER REQUIRED. Must be fully conversant with Caterpillar equipment of all types, prepared to travel. Good wages and caravan accommodation supplied. Permanent position for a conscientious man. Write full particulars of previous employers, references and age, to **Box V.2769**, "The Contract Journal."

J. M. JONES AND SONS, LTD., **REQUIRE CIVIL ENGINEER** to control civil engineering division. The successful applicant will be required to reorganise and develop the division. Progressive appointment with staff pension and life insurance, and assistance with housing if necessary.—Apply with details of general and technical education, qualifications, and details of experience, and state commencing salary required, to the Secretary, **J. M. JONES AND SONS, LTD.**, Highway Works, Maidenhead.

GENERAL FOREMAN

£25 per week and bonus. **REQUIRED** for multi-storey flats contract in East London. Preferably a carpenter by trade.—Write, in the strictest confidence, stating age, experience and all relative details, to:

BOX V.2786, "THE CONTRACT JOURNAL."

TECHNICAL ORDER SURVEYOR.—Permanent 26-38 years with H.N.C. in Building, and experience with bills, specifications, drawings, and can take-off material schedules and make joinery detail drawings. Will be based at head office in Wolverhampton. Applicants should get in touch with us to discuss terms and conditions. **WILSON LOVATT AND SONS, LTD.**, Clarence Street, Wolverhampton.

MANAGER REQUIRED for building and civil engineering contractors, Birmingham. Commencing salary £2,000 per year plus car. Good prospects. Only fully experienced and good-class men need apply. All replies treated in strictest confidence. Write, giving full details, to **Box V.2780**, "The Contract Journal."

WANTED.—Experienced **QUANTITY SURVEYOR** for contractors' head office in Cumberland. Must have sound knowledge of site measuring, valuations, final accounts, etc.—Write, stating age, experience, and salary required, to **Box V.2779**, "The Contract Journal."

APPOINTMENTS VACANT

SITE ENGINEERS REQUIRED for building contracts in London area. Must have considerable experience in multi-storey concrete-framed buildings. Good salary for men with initiative.—Apply in writing, stating age and experience, to **M. J. GLEESON (CONTRACTORS), LTD.**, Hareton House, London Road, North Cheam, Surrey.

COST AND BONSING CLERK REQUIRED for interesting work in flooring specialist's office. With knowledge of the building industry. Good prospects in progressive company.—Write, with details of age, experience, and salary required, to **Box V.2783**, "The Contract Journal."

BUILDING ESTIMATOR.—An opportunity exists for a man experienced in estimating for all types of building works and preferably having A.I.B.E., L.I.O.B. or H.N.C. qualification. Should you be a suitable applicant, we can offer a good salary and favourable conditions.—Please get in touch with **WILSON LOVATT AND SONS, LTD.**, Clarence Street, Wolverhampton.

BUYER (BUILDING AND CIVIL ENGINEERING INDUSTRIES)

SCOTTISH SPECIAL HOUSING ASSOCIATION, LTD., invite applications for the superannuable appointment of **BUYER** at an annual salary of £1,450. Candidates must be keen and energetic and have sound administrative ability, allied to extensive experience of large-scale bulk buying for the building and civil engineering industries, including multi-storey flats. In charge of all materials used in the building and civil engineering industries and of their markets and available sources is essential. A house to reside in, although desirable, if required.—Application forms obtained from:

The Secretary,

SCOTTISH SPECIAL HOUSING ASSOCIATION, LTD.,
15/21 Palmerston Place, Edinburgh.

APPLICATIONS are invited for the following positions in the structural engineering section of a major building and civil engineering contractor: **CONTRACTS MANAGER**—preferably a qualified Structural Engineer who has had good experience in charge of large contracts; **SITE ENGINEER**—preferably qualified and experienced in setting-out on large contracts. A knowledge of concrete control would be an asset; **ENGINEER/DRAUGHTSMAN**—with good experience in temporary works design and design of shuttering. The appointments are to the permanent staff and offer excellent opportunities for advancement. Good salary and conditions. Bonus and superannuation schemes are in operation.—Please send full details to **Box C.M.3877, A.K. Advertising**, 212a Shaftesbury Avenue, London, W.C.2.

CONSULTING ENGINEERS REQUIRE AN ENGINEERING ASSISTANT with experience of water supply, sewerage and reinforced concrete design. Progressive position; contributory pension scheme. Applicants must have Parts "A" and "B" of A.M.I.C.E. or at least four years' experience of work of this type. Salary in accordance with age and qualifications.—Apply in writing to **MESSRS. JOHN DOSSOR AND ASSOCIATES**, 54 Broad Street, Worcester.

F. W. SHANKS, LTD., Building and Civil engineering Contractors, Hunstanton, Norfolk, have a vacancy on their permanent staff for an **ESTIMATOR/SURVEYOR**. Applications are invited from men aged 25-45 who, preferably, have gained experience with medium-sized firms in both building and civil engineering work.—Written applications must give age, fullest details of education, training and experience, with salary required, indicating when free to accept appointment.

CIVIL ENGINEER REQUIRED for civil engineering contracts in reinforced concrete bridge and sewerage disposal works. Successful applicant would be required to work under the control of a Civil Engineering Agent, and previous experience in this type of work is essential. Excellent prospects are offered in a well-established and expanding organisation. We have a progressive staff policy operating superannuation, profit-sharing schemes, and assistance with car purchase.—For further details and application form, apply in confidence, giving brief particulars, to **A. C. Bryant, Managing Director, C. BRYANT AND SON, LTD.**, Small Heath, Birmingham, 10.

GEORGE WIMPEY AND CO., LTD.

Invite applications for **CIVIL or MUNICIPAL ENGINEERS** for appointments in their London and Newcastle offices. Applicants should have considerable general experience in municipal engineering, particularly the design and construction of roads and sewers and attendant works, and should hold either the Testamur Examination of the Institution of Municipal Engineers, or A.M.I.C.E. Applicants should be within the age limits of 35-45. Corporate Membership of the Institution of Municipal Engineers or Municipal Engineers is essential. The successful applicants would be responsible for all matters in connection with the advance preparation of housing sites, together with the direction and control of staff engaged upon the design of such matters. Commencing salary range £1,200-£1,500 per annum. A car will be provided and staff pension scheme is in operation.—Applications to:

Establishment Officer (2G),
GEORGE WIMPEY AND CO., LTD.,
27 The Grove, Hammersmith, London, W.6.

SITE MEASURING AND COSTING SURVEYORS AND SURVEYORS' CLERKS required for contracts in the Newport, Hertfordshire and Lincolnshire areas. Local man preferred but opportunities to travel later. Age approximately 21 to 30. Should have had previous site experience and knowledge of standard methods of measurement.—Apply in confidence to the Contract Labour Dept., **SIMON-CARVES, LTD.**, Cheadle Heath, Stockport, Cheshire, quoting Ref. C.11.

VAL DE TRAVERS ASPHALTE REQUIRE CONTRACTS SUPERVISOR experienced in rolled asphalt and tarmacadam works.—Replies, treated in strictest confidence, to Midland Area Manager, 5 Lower Temple Street, Birmingham, 2.

SENIOR ESTIMATOR REQUIRED by firm of civil engineering contractors. Head office appointment. Reading area. Permanent and progressive post with superannuation scheme in operation.—Write in confidence, stating age, full details of experience, with past employers and salary required, to **Box V.2789**, "The Contract Journal."

ASSISTANT to Chief Buyer REQUIRED. Some experience essential.—Apply, in writing, giving full details and salary required, to Chief Buyer, **G. PERCY TRENTHAM, LTD.**, Pangbourne, Reading, Berkshire.

APPOINTMENTS VACANT

CUBITTS.—Applications are invited from: ESTIMATORS, preferably aged 35 or over, who have good experience of tendering either for major civil engineering works of medium-sized building contracts in and around London; SURVEYORS, fully experienced in variations and interim and final accounts. The positions are permanent and offer good opportunities for progress in an expanding organisation. Please send full details to Personnel Manager (CJ8803), HOLLAND & HANNEN AND CUBITTS (G.B.), LTD., 1 Queen Anne's Gate, London, S.W.1.

CUBITTS.—Applications are invited for positions in South-West England for following: CONTRACTS SUPERVISOR, preferably a qualified Structural Engineer, with good experience in control of large structural engineering contracts; COST SURVEYOR, with good experience of unit costing and incentive bonus schemes; OFFICE MANAGER; COST CLERKS. The appointments are permanent and offer scope for advancement, together with interesting and varied work, and good conditions. Successful applicants will be based at Bristol or on site in South-West England, but in the first instance full details should be sent to Personnel Manager (CJ8802), HOLLAND & HANNEN AND CUBITTS (G.B.), LTD., 1 Queen Anne's Gate, London, S.W.1.

QUANTITY SURVEYORS

Owing to our continued expansion, we REQUIRE the following additional quantity surveying staff:—

With considerable experience, for long-term building and civil engineering contract in West Cumberland. Quote Ref. 501.

For two ASSISTANT QUANTITY SURVEYORS for hydro-electric contracts in Inverness-shire and Argyllshire. Quote Ref. AQS.

For one ASSISTANT QUANTITY SURVEYOR for building and civil engineering contract in Yorkshire. Quote Ref. AQS 2.

The appointments are permanent, with excellent prospects and good salary. Applications, giving details of age, training and experience, will be treated in the strictest confidence.

THE MITCHELL CONSTRUCTION CO., LTD.
Building and Civil Engineering Contractors,
Wharf Works, Peterborough, Northants.

CUBITTS.—HOLLAND & HANNEN AND CUBITTS (G.B.), LTD., have vacancies for: AGENTS with good experience in control of large building or structural engineering contracts; PLANNING ENGINEERS, preferably with a recognised qualification in civil or structural engineering, and with experience of time and method operational planning and budgetary control of expenditure on labour, plant and materials. The appointments are permanent, offering good conditions, interesting and varied work, and excellent opportunities for advancement. Please send full details to Personnel Manager (CJ8804), Holland & Hannen and Cubitts (G.B.), LTD., 1 Queen Anne's Gate, London, S.W.1.

PLANT WORKSHOP FOREMAN.—Experienced Workshop Foreman REQUIRED by national surfacing contractors to take charge of expanding central workshops in the London area. Applicants must have first-class practical ability and should preferably have knowledge of asphalt manufacturing and surfacing plant, electrical installation work, and general civil engineering equipment. Write, giving full details of previous experience, to the Chief Mechanical Engineer, Box V.2813, "The Contract Journal."

COST SURVEYOR REQUIRED on project in Liverpool area. Knowledge of costing in building and civil engineering essential. Permanent employment for suitable candidate. Reply in first instance, with references, to the Personnel Manager, G. PERCY TRENTHAM, LTD., Pangbourne, Reading, Berkshire.

REPRESENTATIVE.—CLAY CROSS (IRON AND FOUNDRY) LTD. REQUIRE TECHNICAL SALES REPRESENTATIVE for spun-iron pipes and castings, at their London office. Good starting salary and prospects. Pension scheme, etc.—Write Clay Cross (Iron and Foundries), Ltd., 47 Victoria Street, London, S.W.1.

A LEADING FIRM

Of London consultants has been engaged to assist in the appointment of a SENIOR AGENT for a large internationally known company of engineering contractors. Previous experience must include an outstanding commercial record in controlling large-scale contracts involving all engineering aspects. These contracts may be situated in any part of the world over the next five to ten years, and after that will lead to top executive positions in the London head office. Initial starting salary in the U.K., £3,000 per annum.—Write, giving full details, to:

Mr. K. Lloyd,
AUSTIN KNIGHT, LTD.,
Incorporated Practitioners in Advertising,
212A Shaftesbury Avenue, London, W.C.2.

WELL-ESTABLISHED. medium-sized building and contracting company REQUIRES an experienced BUILDER'S SURVEYOR. The company operates in London and Home Counties north of Thames. Successful applicant would, within a smoothly run organisation, be responsible for administering contracts involving progress, sub-contractors, interim payments and final accounts. The company is controlled by three working directors who act as contract supervisors. Interesting and satisfactory position for man of ability and character. Salary £1,250 per annum plus merit bonus of about £300 per annum. A contributory pension scheme is available. Car provided and assistance given with housing accommodation. Write Box V.2807, "The Contract Journal."

GAMMON PAKISTAN, LTD. have vacancies for three REINFORCED PRESTRESSED CONCRETE DESIGNERS in Karachi. Must be Pakistani nationals and should have a degree in civil or structural engineering, and have at least five years' experience in similar positions. Apply in writing to J. C. Gammon (England), Ltd., 202 Sloane Street, London, S.W.1.

TECHNICAL ASSISTANT REQUIRED by precast concrete manufacturers. Experienced in detailing precast reinforced concrete and taking-off materials. Good opportunity for young man.—Write, stating age, experience, and salary required, to THE MODULAR CONCRETE CO., Staines Road, Bedford, Middlesex.

SENIOR ENGINEER/SUB-AGENT REQUIRED for power station contract by major firm of civil engineering and building contractors. This is a permanent appointment, with prospects of rapid promotion to Agent, and has ample scope for further advancement. Advantages for the right applicant. Write Box V.2671, "The Contract Journal."

APPOINTMENTS VACANT

AGENT REQUIRED by major civil engineering and building contractors operating on a national scale on nuclear, steam and hydro-electric projects. This permanent appointment is initially for a major civil engineering contract with excellent opportunities for advancement, good salary and conditions, and entry into superannuation scheme after 12 months' service. Write Box V.2820, "The Contract Journal."

MANAGER REQUIRED for substantial company of sand and ballast merchants, Greater London area. Only fully experienced men should apply, giving all details, including past and present employers. Applications treated in strictest confidence. Write Box A.N.501, "The Contract Journal."

ASSISTANT ENGINEER REQUIRED by major civil engineering and building contractors operating on a national scale on nuclear, steam and hydro-electric projects. This permanent appointment is initially for a major civil engineering contract, with excellent opportunities for advancement. Good salary and conditions, and entry into superannuation scheme after 12 months' service.—Apply to THE MITCHELL CONSTRUCTION CO., LTD., Wharf Works, Peterborough.

LAND SURVEYOR

REQUIRED by large speculative housing department. Transport provided for travelling to sites. Must be capable of carrying out accurate detailed surveys, setting out, levelling, and have good knowledge of drainage. Excellent prospects. Pension scheme and good salary offered.—Apply, in writing, stating age and salary required, to:

Chief Architectural Surveyor,
SIR LINDSAY PARKINSON AND CO., LTD.,
6 Lambeth Road, St. George's Circus, S.E.1.

YOUNG ENGINEER for setting-out, levelling and measuring on contract work. Portland Dockyard and Weymouth area.—Apply A. E. FARR, LTD., Station Road, Westbury, Wilts., or Agent, Mr. R. D. Jones, H.M. Dockyard, Portland, Dorset.

ASSISTANT COMPANY SECRETARY REQUIRED by well-established and progressive civil engineering contractors in London. Must have good commercial, secretarial and accountancy knowledge and experience. Age 30-40. Four-figure salary. To succeed present secretary on retirement. Non-contributory pension and life assurance.—Write, fully stating age, experience, and salary expected, to Box V.2812, "The Contract Journal."

COST CLERKS.—RICHARD COSTAIN, LTD., have vacancies for Cost Clerks to work on civil engineering contracts. Preference will be given to candidates studying for I.C.W.A. qualifications.—Young men, aged 20-30, who are seeking interesting posts with excellent prospects, and who are prepared to work on site are invited to apply to Assistant Personnel Officer, 111 Westminster Bridge Road, London, S.E.1.

WIMPEY

BUILDING GENERAL FOREMEN REQUIRED for large site organisation in London and Home Counties. Applicants must be tradesmen and have had experience in controlling work in one or more of the following classes of building: Industrial developments; multi-storey flats; non-framed flat construction; speculative housing. Permanent appointments, with good initial salaries and opportunities for promotion. Contributory pension scheme.—Applications, giving age and experience, and quoting Ref. 81D, to:

GEORGE WIMPEY AND CO., LTD.,
27 Hammersmith Grove, London, W.6.

SITE SAFETY OFFICER REQUIRED on Padham "B" Power Station, now under construction. Applicant should currently hold a similar position. Application to be made in writing, stating qualifications, age, and salary required, to the Agent, M. J. GLEESON (CONTRACTORS), LTD., Padham "B" Power Station, Padham, near Burnley, Lancs.

AGENTS REQUIRED to take charge of building and civil engineering contracts. Applicants should be experienced in precast and in-situ concrete construction.—Write, giving age, experience, and present salary, to the Contracts Manager, THE LONDON FERRO-CONCRETE CO., LTD., 2D, Matted Close, Maylands Avenue, Hemel Hempstead, Herts.

GENERAL FOREMAN REQUIRED to take charge of building and civil engineering contracts. Applicants should be experienced in precast and in-situ concrete construction.—Write, giving age, experience, and present salary, to the Contracts Manager, THE LONDON FERRO-CONCRETE CO., LTD., Matted Close, Maylands Avenue, Hemel Hempstead, Herts.

BRANCH MANAGER REQUIRED. Builders' merchant, Enfield. Contributory pension and profit-sharing scheme operating.—Apply in own handwriting, with full details past experience, salary required, and when free.—Write Box V.2818, "The Contract Journal."

A LARGE CIVIL ENGINEERING AND PLANT HIRE CONCERN

In the North-West Midlands wishes to appoint a **ENGINEER** with a permanent position which offers unlimited scope to a keen energetic person who is prepared to work hard. A salary well above average is offered, together with a company car and admission to the superannuation scheme.—Write in first instance, giving full details of age, qualifications and previous experience, to:

BOX V.2798, "THE CONTRACT JOURNAL."

PLANT MANAGER.—Persia. Two-year contract. Salary not less than £2,000 per annum; free accommodation; car provided. A well-established Iranian company REQUIRES immediately an experienced Plant Manager who will accept responsibility for the servicing and maintenance of their complete range of equipment. Those with a knowledge of asphalt plant, unmarried, and aged between 30 and 40 years, will have preference.—Tel.: ABB 4393; or write Box V.2819, "The Contract Journal."

CONSULTING ENGINEERS have vacancy for **ENGINEER** with knowledge of soil mechanics practice and its application to all types of foundation design. Site experience of reinforced concrete construction desirable.—Write, stating age, qualifications, full details of experience and names of past employers, to Box V.2814, "The Contract Journal."

APPOINTMENTS VACANT

F. R. BULLEN AND PARTNERS. Consulting Engineers. REQUIRE for their Glasgow and Darlington offices DETAILERS experienced in reinforced concrete or structural steelwork.—Applications, in writing, should be sent in the first instance to Dacre House, Dean Farrar Street, Westminster, London, S.W.1.

TIMEKEEPERS/WAGES CLERKS REQUIRED immediately by leading firm of building and civil engineering contractors for work in the London area. Permanent and pensionable positions, with good staff conditions.—Applications should give full details of age, past experience, and salary required, to Box TW3915, A.K. Advertising, 212a Shaftesbury Ave., London, W.C.2.

ASSISTANT ENGINEERS, single, and preferably qualified, REQUIRED for a 15-months tour in Nigeria with an established civil engineering concern. Qualities expected are initiative, character and good health.—Written applications, in confidence, giving particulars of age, education and experience to date, to HARBOUR AND GENERAL WORKS, 173 St. Stephen's House, Victoria Embankment, Westminster, S.W.1.

PLANT ENGINEER REQUIRED by London building and civil engineering contractors to assist Plant Manager. Mechanical engineering qualification, with workshop experience, essential, and some knowledge of contractors' plant desirable.—Apply in writing, stating age, training, qualifications, experience and salary expected, to JARVIS AND SONS, LTD., 239 Vauxhall Bridge Road, S.W.1.

T.H. CONTRACTORS, LTD., REQUIRE a First-class AGENT to run a large sewage contract in the South-East of England. Must have proven record of success in similar contracts completed. First-class conditions and permanency in a rapidly expanding organisation to the right man.—Write in first instance, giving full details, to T.H. Contractors, Ltd., 300 Chiswick High Road, London, W.4.

THREE SCREWMEN for Blaw Knox Paviours PF.90 and PF.45. Experienced operators only, who will receive top wages, travelling, maintenance and subsistence allowance. Willing to travel to any part of the country. Caravan provided.—Apply for details, giving age and experience, to CAMMIDGE ROAD CONSTRUCTIONS, LTD., 14/26 Henrietta Street, Coventry. Tel.: Coventry 98473 or 98939.

CLERK (Male), age 18/25, for plant hire division of well-established civil engineering contractors. Must be live, progressive, energetic, able to take levels, correspondence and ready to act on own initiative. Accountancy experience an advantage. Excellent prospects, permanent position and pensionable.—Write age, experience, and salary required, to Secretary, FITZPATRICK AND SON (CONTRACTORS), LTD., 455 Old Ford Road, London, E.3.

STRUCTURAL or CIVIL ENGINEERING DESIGNER REQUIRED for head office appointment. Experience in reinforced concrete design, foundations and industrial structures an advantage. Permanent position with good salary, bonus scheme, and entry into superannuation scheme after 12 months' service. Good opportunity for qualifying as A.M.I.C.E. and A.M.I.Struct.E.—Write, giving age, qualifications, and details of experience, to THE MITCHELL CONSTRUCTION CO., LTD., Wharf Works, Peterborough.

SENIOR DRAUGHTSMAN, with sound experience in steel and timber framing design, REQUIRED by major civil engineering and building contractors at their head office. Good salary, commensurate with experience and ability. Entry into superannuation scheme after 12 months' satisfactory service.—Write, stating age and experience, to THE MITCHELL CONSTRUCTION CO., LTD., Wharf Works, Peterborough.

KEEN ESTIMATOR/SURVEYOR REQUIRED for sportsgrounds and hard courts. Previous experience in similar capacity essential. Able to take levels, prepare plans and estimate competitively, particularly on bulk excavation. Salary according to experience. Young Assistant keen to learn the business would be considered.—Apply, with full details of previous experience, age, etc., to GRASSPHALTE, LTD., High Street, Hampton Hill, Middlesex.

CLERK WANTED for head office of small firm of contractors engaged on roads, sewers and housing estate developments. Must be familiar with levels, P.A.Y.E. invoices and general office work, and able to type. The knowledge of this industry an asset. Write first to PERCE CONTRACTORS (1960), LTD., 200, Bishop's Street, Bishop's Cleeve, Herts.

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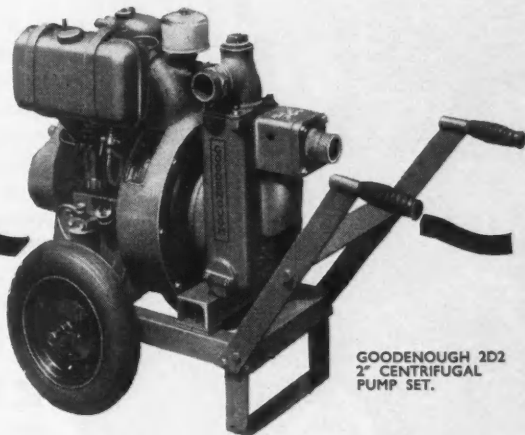
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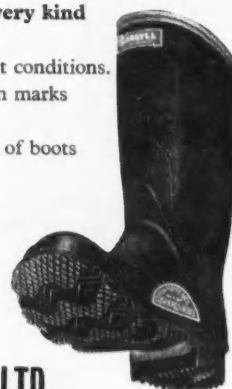
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GOVERNMENT OF EAST PAKISTAN.

EAST PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY.

TEESTA PROJECT— CONTRACT M-1 MAIN BARRAGE.

The above Authority anticipates inviting TENDERS for the ABOVE CONTRACT M-1 in the near future. The complete Teesta Project includes the Construction of a Barrage on the River Teesta, East Pakistan, together with Irrigation Canals covering an area of 1½ m. acres approx., and Hydro-electric Power Installation at an estimated value of £30m. approx. The present Contract M-1 Main Barrage has a value of £5½m. approx.

Applications are invited from contractors who wish their name to be included on a list from which a selection will be made by the Authority of a limited number of firms who will be invited to tender for the work.

Applications, stating details of similar work recently completed, should be sent to the Consulting Engineers to the Authority, MESSRS. HAIGH, ZINN AND ASSOCIATES, Collingham House, Eagle Street, Southampton Row, London, W.C.1, not later than First Post on Monday, 17th October, 1960.

BOROUGH OF WESTON-SUPER-MARE.

EBDON ROAD—NEW CEMETERY.

CONTRACT NO. 1:
Comprising Roadworks, Sewers and Hard-standing for Car Park, etc. The quantities involved are approx. 1,600 sq. yd. of Roadworks, 660 sq. yd. Tarmacadamed Hardstanding 90 in. yd. 4in. dia. Pipes, and 180yd. of 6in. dia. Pipes.

CONTRACT NO. 2:
Comprising the Preparation and Seeding of Site and the Provision of Land Drainage. The quantities involved are approx. 4½ acres of Seeding, and 230 lin. yd. of 6in. dia. Porous Concrete Pipes.

FIXED-PRICE TENDERS are invited for EITHER or BOTH of the ABOVE CONTRACTS from contractors experienced in similar works. The Specifications, Bills of Quantities and Forms of Tenders may be obtained and the Drawings and Conditions of Contracts may be examined at the Office of the Borough Engineer on payment of a deposit of £2 2s., returnable on the receipt of a bona-fide Tender.

Tenders, sealed in the envelopes provided, must be delivered to the undersigned not later than 9.30 a.m. on FRIDAY, 28th October, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

R. G. LICKFOLD,
Town Clerk.

Town Hall,
Weston-super-Mare,
3rd October, 1960.

CITY AND COUNTY OF NEWCASTLE UPON TYNE.

The HOUSING COMMITTEE of the CORPORATION are prepared to receive TENDERS for the SUPPLY and DELIVERY of QUEENLINE KITCHEN FITTINGS required for 60 Mid-story Flats now in course of erection at SCOTSWOOD ROAD (Hawes Street) and POTTERY BANK, Newcastle upon Tyne. Specification and Form of Tender may be obtained on application in writing to the City Architect, 18 Cloth Market, Newcastle upon Tyne, 1, where Plans and Conditions of Contract may be seen.

Sealed Tenders must reach the City Architect not later than 10 a.m. on TUESDAY, the 8th November, 1960. No Tender will be received except in the original envelope provided, which must not bear any name or mark indicating the sender.

The Committee do not bind themselves to accept the lowest or any Tender.

JOHN ATKINSON,
Town Clerk.

Town Hall,
Newcastle upon Tyne, 1,
3rd October, 1960.

PLANNING ENGINEER. — An Engineer is REQUIRED who has had several years' site experience on building and civil engineering contracts of between £50,000 and £1m. in value, and spent some time recently in a modern planning department. The successful applicant will be expected to produce overall programmes at the tender stage of any contract, and detailed work schedules during construction. This is a good opportunity for a first-class man to join a young, expanding organisation. — Write full details to Box V.2833, "The Contract Journal."

AGENTS REQUIRED. Fully experienced in control from start to Final Certificate, working from head office for: (1) Schools, factories, houses, and similar public and private building; (2) roads, sewers, and other civil engineering works. Excellent terms and prospects for right men. Bonus and pension schemes in operation. — Applications to WINTON HAYES, LTD., Biggleswade, Beds.

SITE AGENTS REQUIRED for a large building term contract starting shortly the Farnborough, Hants. area. Applications are invited from experienced men of proven ability. — Write, giving full details, and salary required, to the Manager, OXFORD PLANT, LTD., West Way, Botley, Oxford.

SITE AGENTS REQUIRED for a building contract about to commence in the Bournemouth area. Applications are invited from experienced men of proven ability. — Write, giving full details and salary required, to Box 1006, c/o Geo. Murray (Advertising), Ltd., Columbia House, Aldwych, W.C.2.

MINERS and MINERS' LABOURERS REQUIRED. Experience in soft ground tunnels and setting of precast concrete tunnel segments essential. — Apply, in writing, to JOHN HOWARD AND CO., LTD., Morphet Branch Dock, Birkenhead.

PLANT SALES REPRESENTATIVE. with experience in the building trade, REQUIRED, Oxfordshire/Berkshire area. Salary, commission and car provided. Apply in first instance, in writing, stating age, experience and salary required, to the Manager, OXFORD PLANT, LTD., West Way, Botley, Oxford.

FOREMEN, TRADES FOREMEN and GANGERS REQUIRED for work in London area. Good wages and prospects. — Apply in writing, giving details of previous experience, to C. J. SIMS, LTD., 2 Victoria Street, S.W.1.

GLOUCESTERSHIRE COUNTY COUNCIL.

GLOUCESTERSHIRE TRAINING COLLEGE OF DOMESTIC SCIENCE.

PROPOSED HOSTEL ACCOMMODATION AND EXTENSIONS TO COLLEGE.

The County Council are prepared to receive names of general contractors who wish to be considered for the ABOVE WORK, comprising Three Hostel Blocks, estimated to cost approx. £205,000, and Extensions to the Teaching Accommodation, estimated to cost £165,000.

The whole of the works is to be completed by the 31st July, 1962, and only contractors with the necessary organisation, able to carry out this work within the time specified, should apply.

Tenders for the Hostel Blocks are based on Bills of Quantities which will be available by the 17th October, and in connection with the College extensions, the successful contractor will be invited to submit a Tender within three months of the acceptance of the Tender for the Hostel Blocks. In each instance the lowest or any Tender will not necessarily be accepted.

The Council's appointed Architects for these works are MESSRS. FARMER AND DARK, Chartered Architects, Romney House, Tufton Street, London, S.W.1, and the Quantity Surveyors MESSRS. E. C. HARRIS AND PARTNERS, Lynton House, 7/12 Tavistock Square, London, W.C.1.

Names and addresses of contractors wishing to be considered, together with other relevant information, should be forwarded to R. F. FAIRHURST, A.R.I.B.A., County Architect, Shire Hall, Gloucester, not later than WEDNESDAY, 12th October, 1960.

GUY H. DAVIS,
Clerk of the County Council.

URBAN DISTRICT OF WESTHOUGHTON.

DICCONSON LANE—ASPHALT SURFACING.

TENDERS are invited for the SUPPLY and LAYING of approx. 9,700 super. yd. of HOT ROLLED ASPHALT SURFACING for Dicconson Lane, Westhoughton (B.5239). Particulars for tendering from the Surveyor, Town Hall, Westhoughton.

Tenders, in plain sealed envelopes addressed to CLERK OF THE COUNCIL, Town Hall, Westhoughton, Bolton, bearing the words "Tender for Dicconson Lane Surfacing," but not bearing any name or mark indicating sender, to be delivered not later than MONDAY, 24th October, 1960.

Lowest or any Tender may not necessarily be accepted.

MANGOTSFIELD URBAN DISTRICT COUNCIL.

SODBURY RURAL DISTRICT COUNCIL.

THORNBURY RURAL DISTRICT COUNCIL.

FROME VALLEY SEWER.

Contractors who wish to submit a TENDER for the ABOVE WORK should submit their names to the Clerk of the Sodbury Rural District Council, Council Offices, Chipping Sodbury, Bristol, not later than MONDAY, 31st October, 1960, together with details of similar work carried out and the name of the engineer responsible, to whom reference may be made.

The Councils will select a list of contractors to be invited to apply for the work. It is anticipated that Tenders will be received early in January, 1961, and that work will commence early in the year.

Approximate details are as follows:—
4,890 yd. in Reinforced Concrete Brick Lined Internally, 5ft. 6in. x 3ft. 3in.
5,610 yd. of Precast Concrete Sewer, 42in. to 27in. dia.

Eight Crossings of the River Frome and Bradley Brook.

Approx. 500 yd. of above work in tunnel, and including Manholes and other ancillary works.

Any further information required by the contractors wishing to apply may be obtained from the Council's Consulting Engineers, MAYNARD, FROUD AND STEVENS, Alliance House, Baldwin Street, Bristol, 1.

R. RADBURN SMITH,
Clerk of the Mangotsfield Urban District Council.

H. G. WHEWAT,
Clerk of the Sodbury Rural District Council.

J. L. JUDD,
Clerk of the Thornbury Rural District Council.

EXPERIENCED WAGES CLERK/CASHIER REQUIRED immediately. Good salary and prospects to suitable applicant. — Apply MARTIN COWLEY, LTD., Hanford Bridge, Hanford, Stoke-on-Trent. Tel.: Trentham 57705.

SENIOR SITE CIVIL ENGINEER REQUIRED for Industrial project, Home Counties. Progressive position with growing civil engineering organisation. Write Box V.2832, "The Contract Journal."

ENGINEER REQUIRED to take complete charge of road widening job involving rock excavation, including setting out and measurement. Write Box V.2826, "The Contract Journal."

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BOROUGH OF ILFORD.

CENTRAL AREA REDEVELOPMENT.

DIVERSION OF HAVELOCK STREET.

The CORPORATION invite TENDERS for the EXCAVATION FOR, and the CONSTRUCTION OF approx. 1,800 sq. yd. of 6in. Lean-mix CONCRETE SUB-BASE and 7in. REINFORCED CONCRETE CARRIAGEWAY SLAB, the PROVISION of approx. 800 sq. yd. of PAVING and approx. 300 lin. yd. CONCRETE KERB, together with Laying of approx. 300 lin. yd. of 9in. Sewer, and other ancillary Drainage Works.

Conditions of Contract and Drawings may be inspected upon application to the Borough Engineer, Town Hall, Ilford, from whom the Special Conditions, Specification, Bills of Quantities and Form of Tender may be obtained on payment of a deposit of Two Guineas, which is returned on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelope bearing no name indicating the tenderer and endorsed "Tender for the Diversion of Havelock Street," must be delivered to the TOWN CLERK, Town Hall, Ilford, not later than 4 p.m. on the 25th OCTOBER, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

BOROUGH OF HYDE.

TENDERS are invited from contractors experienced in the development of municipal housing for the DESIGN and CONSTRUCTION of the LILLY STREET HOUSING ESTATE, to comprise 32 Houses, 20 Maisonettes and 20 Flats, and to include Roads, Sewers and Street Lighting.

Plans and Conditions of Tender can be obtained from the Borough Surveyor, Municipal Buildings, Greenfield Street, Hyde, Cheshire.

Tenders are to be returned by First Post on MONDAY, 21st November, 1960.

JOHN BINNS,
Town Clerk.

BOROUGH OF LUTON.

PARK STREET/CHURCH STREET IMPROVEMENT.

TENDERS are invited for IMPROVEMENT WORKS, including approx. 1,200 sq. yd. new Carriageway, 6,500 sq. yd. Asphalt Resurfacing, 900 lin. yd. Kerbs, 2,800 sq. yd. Footpath Reconstruction, and ancillary works.

Tender documents obtainable from Borough Engineer, Town Hall, Luton, on payment of £2 2s. deposit, returnable after receipt of a bona-fide Tender, not subsequently withdrawn. Cheques payable "Luton Corporation." Tenders to TOWN CLERK, Town Hall, Luton, by 10 a.m. on 24th OCTOBER, 1960.

ASHBOURNE RURAL DISTRICT COUNCIL.

WATER SUPPLY SCHEME.

CONTRACT NO. 4—CONSTRUCTION OF RESERVOIR.

The above-named Council invite TENDERS from responsible contractors for the CONSTRUCTION of a MASS CONCRETE RESERVOIR, capacity 240,000 gallons, and appurtenant works, at MADGE HILL in the Parish of Atlow.

Drawings and Plans may be seen, and Specification, Conditions of Contract and Bills of Quantities, and Form of Tender may be obtained, on application to the Surveyor, MR. H. LITCHFIELD, Compton Offices, Ashbourne, Derbyshire, on payment of a deposit of £1 1s., which will be returned on receipt of a bona-fide Tender.

Sealed Tenders, marked "Contract No. 4," must be delivered to the undersigned not later than Noon on THURSDAY, the 10th November, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. H. THOMAS,
Clerk of the Council.

Compton Offices,
Ashbourne,
Derbyshire.

3rd October, 1960.

BOROUGH OF GRANTHAM.

JUNIOR ENGINEERING ASSISTANT, A.P.T. II

(£815-£960).

APPLICATIONS, with names of two referees, to Borough Engineer, Guildhall, Grantham, by FRIDAY, 28th October. Housing available.

JOHN F. GUILF,
Town Clerk.

Guildhall,
Grantham.

FITZPATRICK AND SON (CONTRACTORS), LTD. REQUIRE AGENTS experienced in motorway, sewer and road reconstruction. May be required to travel. — Apply, in writing, giving details of previous experience, etc., last three employers and duration of employment with each, to 455 Old Ford Road, Bow, E.3.

TARMACADAM and asphalt contractors and manufacturers require MANAGER to take complete control of their new manufacturing plant in the London area. Vacancy calls for a man willing to take full charge of production, keen to promote sales and maintain good relationship with clients. Wonderful opportunity for young man with sound knowledge of manufacture of these products. — Please write, stating age, experience, and salary required, to Box V.2825, "The Contract Journal."

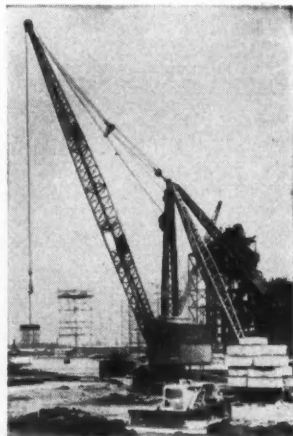
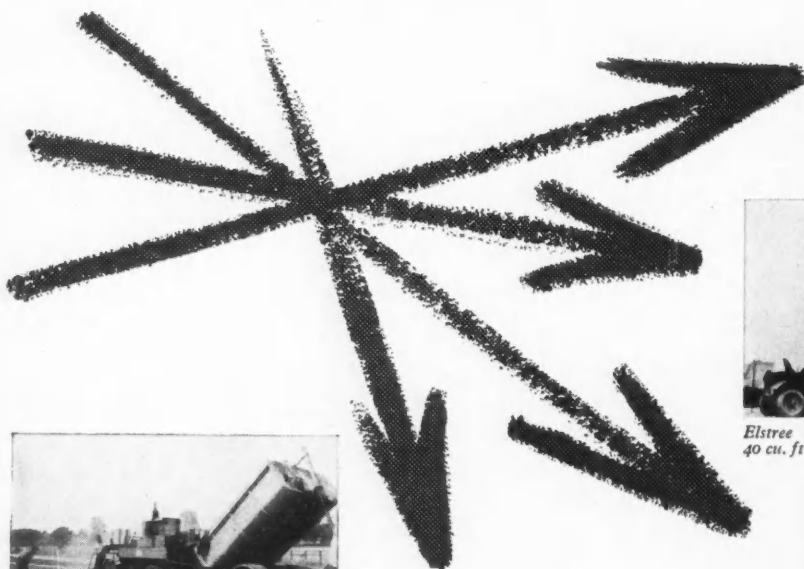
PROVE BROS., LTD. Wire Fencing Manufacturers and Contractors, Rickmansworth Road, Watford, Herts., have vacancy for ASSISTANT in estimating department. Pension scheme; 5-day week. Salary according to experience.

CARPENTERS REQUIRED for bridge construction on Bristol/Birmingham Motorway. Substantance and bonus paid. — Applications to Site Agent, A. JACKMAN AND SON, LTD., Site Office, High Green, Severn Stoke, near Worcester. Tel.: Severn Stoke 265.

BUILDER'S ASSISTANT REQUIRED. Experienced in estimating to final accounts. — Apply in writing, giving particulars, and salary required, to ERIC M. TAYLOR, LTD., High Street, Ongar, Essex.

ASSISTANT ENGINEERS to supervise contracts in London area and Home Counties. — Apply in writing to CAFFIN AND CO., LTD., 25 Craven Street, W.C.2.

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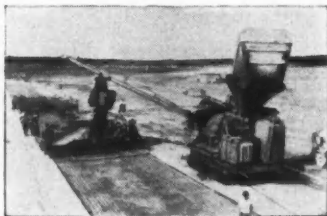
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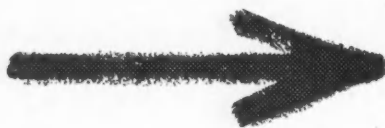


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Editor:
LAWRENCE MCCARTHY

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Advertisements

Advertisement rates may be obtained on application to R. Binfield, Advertisement Manager.

TIMELY CONVENTION

THE convention on the problem of car parking being held in London today by the Institution of Municipal Engineers is indeed timely for there is no disputing the fact that in town centres, at any rate, the parked vehicle invariably creates congestion and is a contributory factor in accidents. But as the Minister of Transport himself has said the motor car is here to stay and the situation calls for clear thinking and sensible measures which will enable the traffic to keep flowing while at the same time providing the parking facilities which are essential to the economic life of the central areas.

Unfortunately, muddled thinking abounds, restrictive measures seemingly being authority's only answer to the problem, with the result that there is increasing friction between the police and the car user, now aggravated by the advent of traffic wardens. Further, some of the restrictions border on the ridiculous. One such example can be found in the Mayfair district of London where during the hours when parking meters are in operation (all day) goods vehicles are allowed to load and unload only in parking bays and motor cars not at all. One is presumably allowed to deliver a millinery box from a 10-ton lorry but not from a private car. One would have thought that if such restrictions were really necessary they could have been limited to the rush hours. Is it that we are so far behind other countries in the science of traffic engineering?

Today, municipal engineers will have the opportunity of pointing the way to the solution of this difficult parking problem—it is to be hoped that they will have some constructive suggestions which will not fall on stony ground.

The Severn Bridge

AT last a start is to be made on the building of the Severn Suspension Bridge. After years of anticipation, tenders are now being invited for contract No. 1 which, as announced last week, involves the construction of the substructure of the bridge and of access roads to the site. Erection of the superstructure and the building of the Wye Bridge and eastern and western approaches will be carried out by further contracts, timed to enable the whole scheme to "proceed smoothly to its planned completion within five to six years."

The Government's decision to proceed with this £16m. project is to be welcomed, to say the least. From the engineer's point of view, of course, it means building a great structure—the Severn Bridge will be the fifth largest in the world (with the exception of the new Forth Bridge, the other larger structures are all in the U.S.A.—the Golden Gate at San Francisco, the George Washington in New York and the new Mackinac Bridge at Michigan).

However, the main purpose of the Severn project is to improve road communications with South Wales. For instance, much of the traffic from Bristol and Somerset going to towns on the South Wales Coast now takes the route via Gloucester. The new bridge will cut 50 miles from this journey as well as helping to relieve traffic congestion in towns on the longer route.

When it is completed in 1965-66, the Severn Bridge will therefore make a major contribution to the improvement of communications in that area. But it is also important to remember the needs of other parts of the country where many smaller schemes are still awaiting approval. Until these are completed the country will never have its modern highway system.

HUNTERSTON NUCLEAR POWER STATION UNDER CONSTRUCTION

Civil Work Substantially Complete

THE major portion of the civil engineering work has been completed on the two reactor structures and the turbine hall of the £40m. Hunterston nuclear power station now being constructed in Ayrshire for the South of Scotland Electricity Board.

Externally, there is little to choose between the appearance of the two reactor structures which tower some 180ft. above the site. The height of the second structure has, until now, been limited by the necessity to lift parts of the first reactor across it.

The last section of the concrete biological shield of the first reactor having been lifted into position, a start has been made on the erection of the structure to house the service machine. This machine is being assembled for testing at the Erith works of the main contractors, The General Electric Co., Ltd., who are building the station in association with Simon-Carves, Ltd., Motherwell Bridge and Engineering Co., Ltd., and Mowlem (Scotland), Ltd.

Emphasis on Mechanical Engineering

The emphasis on construction has moved away from civil engineering to mechanical engineering, with the fabrication and installation of the pressure vessels, steam-raising units, mechanical and electrical plant. It is hoped that the labour problems associated with the assembly of the pressure vessels and steam-raising units have now been resolved.

Since work restarted in January of this year, production has been maintained at a satisfactory level. Inside the first reactor structure, for instance, the assembly of the 3in. thick 70ft. diameter pressure vessel is complete, all courses having been placed and welded together, with the core support grid and inner heat shield located

inside the vessel. The vessel is now being prepared for stress-relief.

The supporting skirt of the second reactor pressure vessel has been fabricated in situ inside the biological shield and the combined bottom head and support course and No. 2 course have been lifted into position.

Elsewhere on the site fabrication and assembly of the steam-raising units has been going ahead; several of the 210-ton vessels having been stress-relieved and hydraulically tested are now in the final stages of construction, which includes nuclear clean conditioning. The first steam-raising unit associated with the first reactor was accepted and lifted by the Goliath crane onto its plinth on September 15 and preparations for tubing and gas circulator installation are already under way. Sections of the clean-conditioned gas ducting linking the reactor pressure vessel with the steam-raising units have arrived on site.

Externally, the 680ft. long turbine hall appears complete, although internally much work is in progress. Three of the six condensers are installed, while the foundations for the turbo-generators are ready, awaiting the arrival of the sets themselves.

Farther down the Ayrshire coast, to the south of the main part of the site, is the circulating water pumphouse. This building is finished and much of the equipment, including pumps, motors, band-screens, valves, filters, etc., is installed. The associated culverts and tunnels on the intake side of the circulating water system have been completed. On the outfall side, some 600yd. farther up the coast, the tunnels have been driven and are now being lined and the siphon seal is almost finished, bringing the end of civil work in this area in sight.

On the north and south sides of the

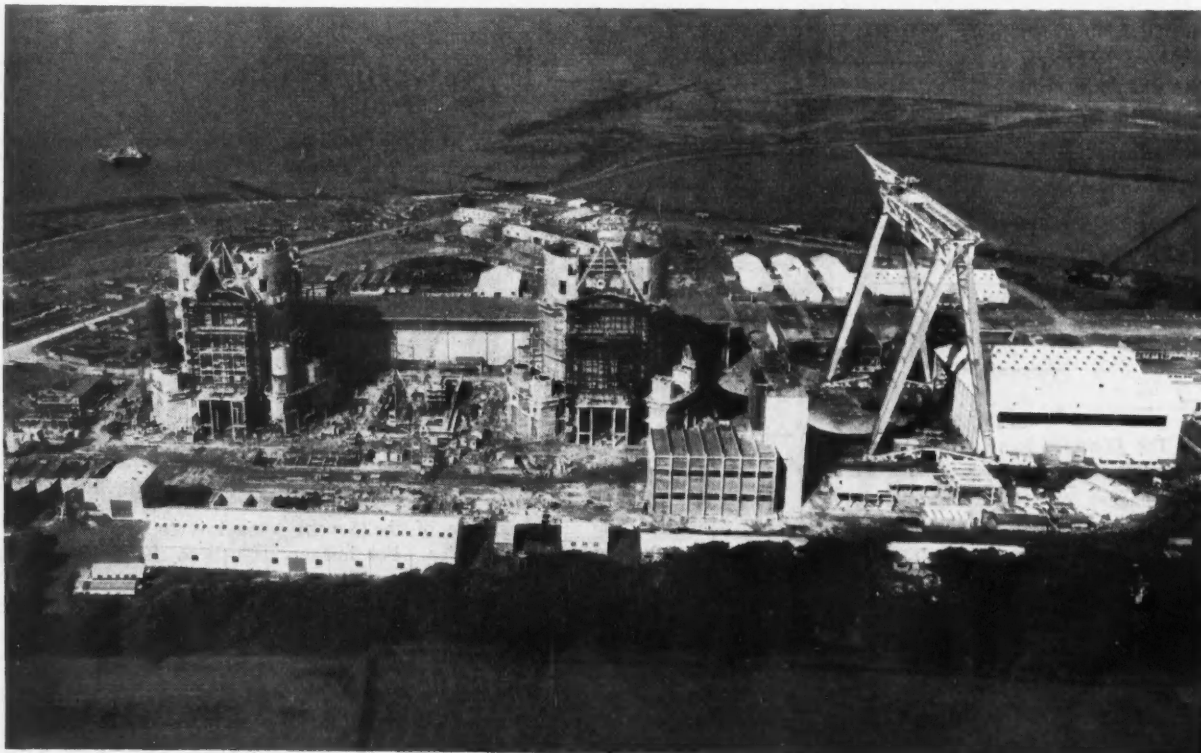
now-completed concrete biological shield the adjoining "reactor building" and "exit building" are being constructed. The steel frames for both buildings were finished some time ago, and much progress has been made with the intermediate floors, brickwork, stairs and lift shafts. On the other two faces of the biological shield the eight concrete plinths and their connecting floors are ready for the steam-raising units, one of which is already in position. All the seal oil pumps, tanks and coolers have been installed at the various levels in the reactor structure.

Much of the concrete structure upon which the tracks of the service machine will be mounted has been built. The 450-ton machine will be situated at the 178ft. 6in. level, above the biological-shield roof of the reactor, and will have longitudinal and cross-traverse facilities.

Rehearsal Shaft

A rehearsal shaft for the charge-machine is included in the reactor structure and the civil engineering for this is finished. It will be able to test every function of the charge machine and is expected to be used daily when the station is in operation. Other completed work associated with the charge machine includes the installation of the turntable tracks, roller path, cooling and shielding water tanks, and the fitting of the massive exit shielding door.

With the circumferential welding between the various courses of the reactor pressure vessel being either finished or in an advanced state of completion, and the welding in and non-destructive testing of the charge nozzles and control rod nozzles also progressing well, the time for stress-relief of the whole structure is approaching. Electrical resistance heating will be employed for this operation, which



An aerial view of Hunterston power station

will then be followed by final installation work and a pneumatic pressure test. This test consists of subjecting the sphere to an internal pressure of 253lb./sq. in. and checking for leaks. Air will be used for this test. All this work will be completed and graphite laying will begin in the summer of 1961.

The top inner surface of the pressure vessel is to be cooled by diverting some of the incoming CO₂ coolant gas through a system of pipes suspended between the inner heat shield and the pressure vessel dome. These pipes which are perforated on the upper surfaces to permit the escape of the coolant gas, are in the process of being erected.

Closing in of the reactor structure with precast concrete units which form the soffit of the roof biological shield has begun. Six inverted double-webbed T-beams are being used for this purpose, and they span the aperture, being supported at each end on a 308-ton member. Some of these T-beams are being left out temporarily to facilitate access to the reactor, but infilling of the remaining members has already commenced.

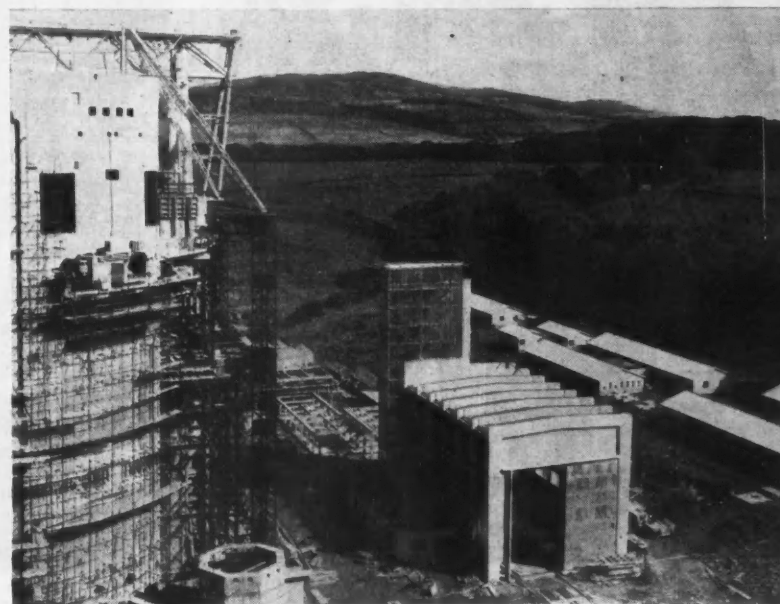
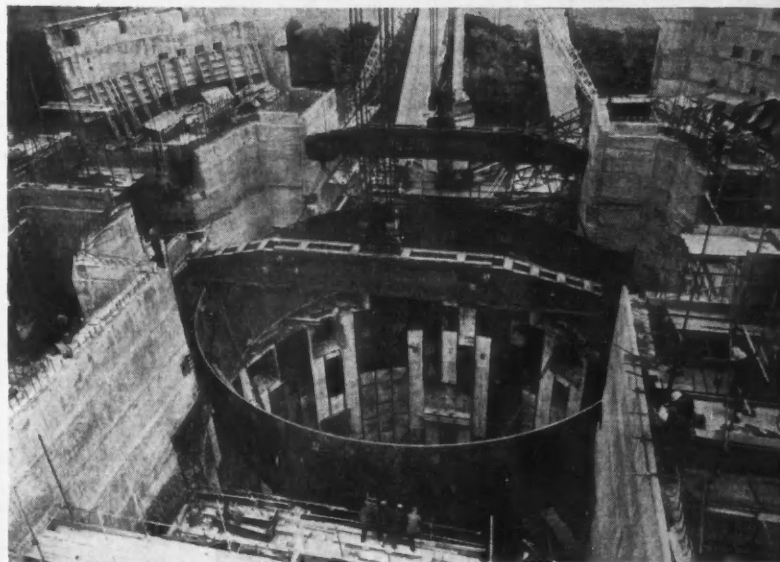
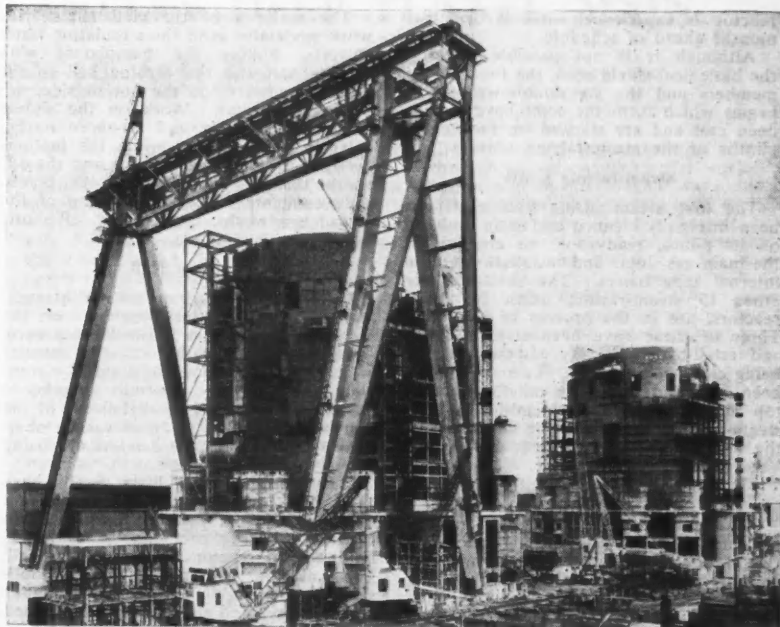
Clean conditioning of the gas ducting, blowers and other plant directly in contact with the circulating cooling gas is necessary if reactor performance is not to suffer. Some of this cleaning is carried out on site, but the majority is performed in the manufacturers' works. Sections of the clean conditioned ducting, parts of the first gas circulator and the main gas valves for reactor A are beginning to arrive on site and are being erected. Temporary structures are also being built in the vicinity of the reactor for the installation of the gas circulators and boiler tubing under nuclear clean conditions.

During the past few months the first gas circulator drive has been undergoing a test of continuous running under load conditions and under simulated conditions of misalignment, and this has been satisfactorily concluded. More recently a shock load test has also been successfully carried out. Each gas circulator will be situated in the base of a steam-raising unit so that it will handle gas at the lowest temperature. The circulator will be mounted vertically with the impeller and diffuser inside the shell and the drive outside. This simplifies the gas sealing arrangements.

Reactor B

As indicated earlier the concreting of the 9ft. thick biological shield has reached an advanced state of completion. This has permitted work to proceed on the fitting of the platework on the outer skirt walls and on the inner face of the walls of the biological shield. This platework incorporates full features for expansion and is spaced 2in. away from the walls to form a region through which air is circulated to control the temperature of the biological shield.

Work on the pressure vessel associated with this reactor is being carried out under cover on the special prefabrication area adjacent to the structure. The outer skirt has been fabricated in situ in the reactor vault, while the combined bottom head and support course was fabricated outside and lifted into position. Slotted gussets welded on the outside of the support course are used to locate it on the outer skirt. The gussets which fit on the inside of the bottom head to carry the core support grid have already been welded into position. More recently the second course has also been placed into position. The other courses of the pressure vessel are all in various stages of manufacture. A start has also been made on fabricating the core support grid, and the inner heat shield. Profiting from



(Top): First steam-raising unit for reactor A being lifted for placing on its plinth

(Centre): Looking down inside reactor B, showing course No. 2 being placed in position

(Bottom): Charge machine maintenance building with clean conditions tower at the rear

reactor A experience, work is over two months ahead of schedule.

Although it is not possible to erect the biological shield roof, the two 308-ton members and the six double-webbed T-beams which form the soffit have already been cast and are stacked on the nearby plinths of the steam-raising units.

Steam-raising Units

The first steam-raising unit shell has been internally cleaned and is in position on its plinth, ready for the erection of the main gas ducts and installation of the internal tube banks. The shells of the other 15 steam-raising units, for both reactors, are in the process of assembly. Three of these have been stress-relieved and tested hydrostatically, and two are now being clean conditioned. Two more have been prepared for stress-relief. Further top and bottom head assemblies of the steam-raising units are being fabricated at the works of the manufacturer and several have been delivered to site.

Circulating Water Works

The construction of this part of the project is probably the most advanced on the station. The intake headwork and jetty are practically complete and the lining of the twin intake tunnels and land shafts is finished: this is also true of the main structure of the pumphouse, including the outer stonework facings.

The penstocks and all eight bandscreens inside the pumphouse have now been erected, together with four of the six main circulating-water pumps and three of their 800-h.p. motors, and associated pipework and valves. The access galleries in the pumphouse will be finally completed after the installation of the remaining pumps.

To prevent fouling of the various culverts and pipework by marine organisms, the circulating-water system is provided with equipment which delivers chlorine solution to the intake headworks. The automatic dosing gear and pumps for this system have been installed in a room in the main pumphouse. The drums of chlorine will be kept in a separate storage room, adjacent to the pumphouse loading bay, which is fitted with special ventilating equipment to ensure the safety of personnel.

The majority of the civil engineering work associated with the circulating-water culverts, linking the pumphouse with turbine hall and the turbine hall to the on-shore culverts on the outfall side, has been carried out. Work on the siphon seal, outfall shafts and on-shore outfall culverts is proceeding while the junctions between the on-shore culverts and the off-shore 10ft-diameter tunnels are practically complete. The construction of the outfall headworks, some 460yd. off-shore, is well up to schedule.

Turbine Hall

Externally, the turbine hall, with transformers in their stone-filled bays on the north side, presents a finished appearance.

The civil engineering on the interior of the turbine hall is substantially complete. The six turbo-generator foundation blocks are in position and delivery of the first two sets are scheduled for October. Two 440-kW alternator exciters are being stored in the building.

Reinforced-concrete blast walls have been constructed to prevent accidental damage to the cabling which will eventually be run over the "pipe bridge" linking each reactor to the turbine hall. The tank floor is completed on the south side of the building and all the tanks have been erected and are now being lined internally with protective coatings.

The first main condenser is installed, and the second and third are in an advanced stage of erection. Good progress is reported on the erection of the first set of feed-heating plant and extraction pumps. The access platforms around the first turbo-generator block are practically finished and work on those around the second set is under way.

The hydrogen water/water coolers on the north side of the first turbo-generator blocks have now been assembled in position and the copperwork between the first two blocks erected as far as possible.

The 42in. inlet and outlet valves in the circulating-water system on the north side of the basement have been fitted and the pipework to Nos. 1 and 2 turbo-generator sets is nearly finished. The racks over the c.w. culverts are ready for receiving the cables, having been extended under the operating floor of the turbine hall.

Under the control room the Mulsifyre-system diesel pumps are installed, together with the refrigerating plant, ductwork, and fans for the central control room air conditioning system.

The first of three 1,000-kW emergency diesel generators is to be erected in the basement of the turbine hall. These sets will be used to supply the essential power station auxiliaries in the event of a failure of the incoming supply to the station.

The H.P. and L.P. steam receivers have been placed in position and fitted with their valves; in addition, the pipe supports for the steam and feed ranges have been grouted in under the operating floor, and over half of the pipework for the first part of the contract has already been erected, the remainder being available on site.

Near the centre of the south annex, both dump condensers with their de-superheaters will be located, and much of the supporting steelwork is finished. The lift communicating between all floors of the building is ready for testing.

The floors of the switch and battery rooms on the north side of the turbine hall have been completed, and most of the switchgear for the first half of the contract is already in the building.

Ancillary Buildings

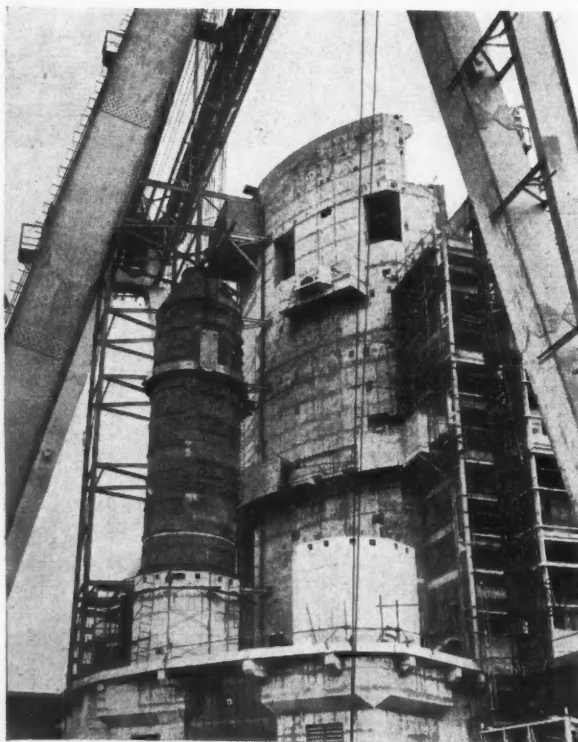
The workshop to the east of the turbine hall is nearly complete so far as cladding is concerned, and the crane is already installed. A "clean conditions workshop" has been constructed inside this building which is being used for the final cleaning of the steam-raising units.

The administration building sited to the east of the turbine hall has now been occupied by the staff of the South of Scotland Electricity Board, and the adjoining welfare building is ready for occupation. The nearby uranium and graphite store is very nearly complete.

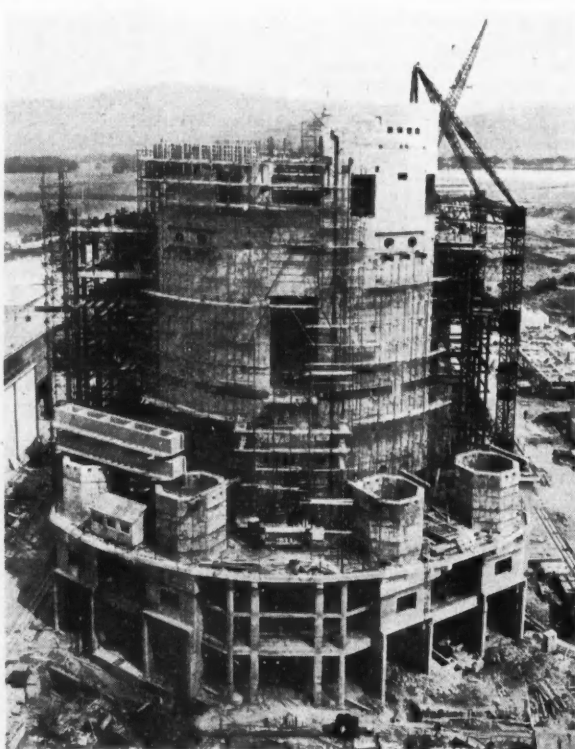
The charge-machine maintenance building, to the south of reactor B, is linked to both reactor structures by means of rail tracks. These serve to bring the charge machines, which are at ground level, into the building for servicing.

The building is practically finished, an interesting feature being the inclusion of a clean-conditions tower, a necessary

(Concluded on page 82)



Close-up view of first steam-raising unit for reactor A



View of the plinths of reactor B steam-raising unit

THAMES-LEE VALLEY DEEP TUNNEL MAIN IS 19 MILES LONG

BELEVED to be the longest artificial tunnel in the world, the 19-mile Thames-Lee Valley water main, which will carry raw water from Hampton, Middlesex, to Lockwood, Walthamstow, was inaugurated last week for the Metropolitan Water Board.

For nearly a century the maintenance of water supply to east London, which area is chiefly dependent upon the River Lee, has given rise to difficulty in periods of drought. In recent years the demand for water in this eastern area has considerably increased, and it is likely that the Board will be required in the not too distant future to provide substantial quantities in bulk to the South Essex Waterworks Company.

The Need for the Main

To make good any deficiency in the Lee supply it has been the practice to rely upon a standby reserve of plant in the Thames Valley and to pump large quantities of filtered Thames water across London. This arrangement is uneconomical inasmuch as during years of average or excessive rainfall certain plant in the Thames Valley remains idle for long periods while in years of drought that in the Lee Valley is only partly loaded. Moreover, at times of high demand, a large proportion of the capacity of the Thames works is necessarily absorbed in meeting the increasing demands for water elsewhere and is therefore not available for east London at the time when it is most needed.

In order to remedy this situation the Board in 1948 decided to lay a large main from Hampton works to King George's reservoir at Chingford so that raw Thames water could be pumped across to the Lee Valley. The choice of the most suitable route for such a main presented a problem. To lay it in open trench through the many miles of streets in the built-up area would obviously present great difficulties, and a semi-circular route round the north of London would not be a satisfactory alternative. Consideration was therefore given to the construction of the main in deep tunnel through the London clay. This clay extends over the more central part of the London Basin and reaches a maximum depth of 500ft. in places. It is usually overlain by an appreciable depth of sand and gravel, and for all practical purposes it is watertight, a property which has been taken advantage of by the Board in constructing all their large storage reservoirs.

The use of tunnels for the conveyance of the public water supply in London had not hitherto been much favoured. They were generally considered to be more expensive than surface pipes, and it is necessary to make them of a certain minimum diameter which is large compared with most surface conduits. It was also usually more convenient for reasons of distribution to have a large number of smaller conduits than a few large ones. The geological conditions, too, were sometimes considered as not specially suitable for hydraulic pressure tunnels.

During the last war plans were conceived by the Board's engineering staff involving the use of tunnels in the future. At that time they had no practical experience of this type of main and in order to ascertain if such a proposal were feasible Sir William Halcrow and Partners, consulting engineers, were asked to study the problem and put forward a suitable design. It was decided to lay an experimental length of about 1,000ft. at the Stoke Newington works in order to ascertain what difficulties were likely to be encountered and to provide information as to the actual costs.

The task which presented itself was to devise a method of laying and jointing a

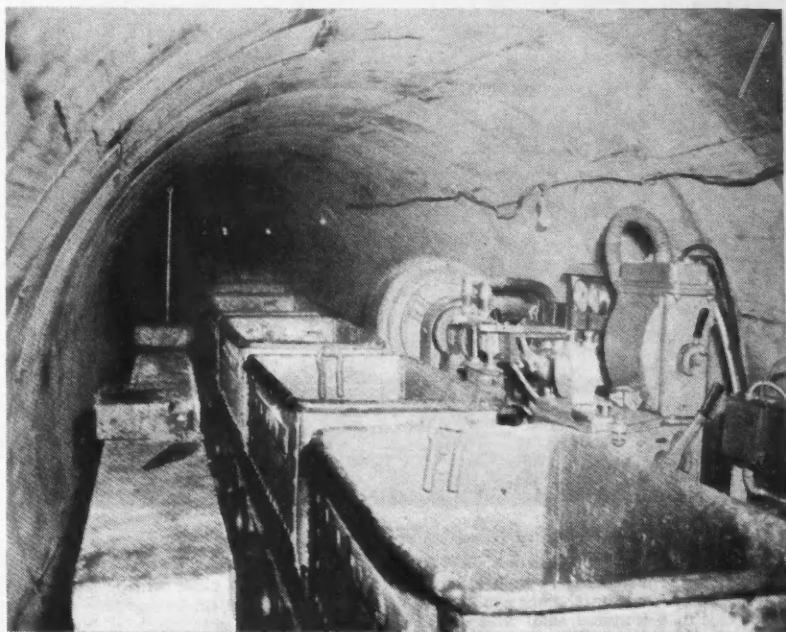
large diameter pipe inside a tunnel of only slightly larger diameter and subsequently filling the space between the main and the tunnel.

Trial borings were sunk at close intervals along the proposed route to determine the level at which the main must run, and hence the pressure under which it would operate. Because of the need to reduce to a minimum the periodical emptying of such a main for cleaning and other purposes it was decided to protect the steel pipes from corrosion by a spun concrete lining.

The driving of the tunnel itself presented little trouble for the London clay is an admirable medium for this purpose. The main problem was the lining, and for this it was decided to adapt and develop the Don-Seg system. This consists of forming a ring with identical precast unreinforced concrete wedge-shaped segments to the

Great care and ingenuity were displayed throughout this experimental work. For instance, at an early stage it was found that the completed rings proved to be a fraction of an inch too tight for the excavation. This possibility had been foreseen by the contractors who thereupon cast the remaining rings to a diameter only $\frac{1}{8}$ in. less than the diameter of the excavation, instead of $\frac{1}{2}$ in. more as in the first few rings, and all these closed without trouble. The output averaged 40 rings (70ft.) a week, and the finished tunnel presented a smooth internal surface with little variation in the nominal diameter of 90in.

For the main in the experimental tunnel concrete lined welded steel pipes were used, the transportation and laying of which also called for special arrangements. Each pipe, 75in. internal diameter and 14ft. 6in. long, weighed 4½ tons, and specially designed gear was used for lower-



General view of tunnel, showing skips for conveying excavated material

exact diameter of a clean circular excavation cut by a special shield. Advantages of this system are—economy, since no reinforcements or bolts are required for the lining; the elimination of pressure grouting between lining and clay; speed of erection; and low costs. The internal diameter of the Don-Seg lining of the tunnel for the experimental length was 90in. and the length of each ring was 21in. The thickness of the lining was 5½ in.

While the preliminary site work was in progress, the contractors cast the first of the segments at their precast concrete works, a complete ring consisting of 10 segments, involving 30,170 segments per mile. As about 19 miles of tunnel would ultimately be constructed, the production of more than 573,000 segments had to be envisaged, each of which weighed 3cwt.

A special tunnel shield required for the Don-Segs was designed by Kinnear, Moodie and Co., Ltd., the contractors for the experimental length, and was built by Arthur Foster (East Ham), Ltd. After sinking a cast-iron lined shaft to a depth of 110ft., a 40ft. length of tunnel was first driven and lined with standard precast reinforced concrete bolted segments grouted under pressure. Thereafter driving continued, using the Don-Segs for lining.

ing the pipes to the bottom of the shaft and for drawing them along the tunnel to the required positions. Since the economy of the design depended so largely upon achieving the smallest possible clearance between the pipe and the tunnel, a great deal of thought was given to the design of the travelling gear. The pipes were subsequently joined together by welding. Good results were obtained and the main difficulty encountered was the fog created by the welding. Compressed air blown in did not remedy this, probably due to the fact that this length of tunnel had only one shaft and a closed end, affording no natural ventilation, and resort was therefore had to extraction by fan duct.

Filling of the annular space between the steel pipes and the concrete lining of the tunnel was essential to ensure that the steel pipe should not rust and to form a solid continuous structure of the concrete segments, the filling and the steel pipe, which would withstand both external and internal pressures, and have no tendency toward movement. For these reasons the more economical filling of blown sand was rejected in favour of concrete or grout.

The laying of this experimental length was commenced in April, 1950, and was

completed by August, 1951. It demonstrated that the construction of a main in tunnel was a practical proposition and that it could be built safely, rapidly and economically. At that time it was assumed that the Thames to Lee Valley tunnel would be lined with steel pipes.

Later in the same year a similar tunnel was constructed for a short distance between the Queen Mary Reservoir and Ashford Common. This was also lined with Don-Segs, but no steel pipe lining was used, investigations made before, during and after construction confirming that the weight and strength of the clay surrounding the concrete segments would withstand the pressure of the water.

£1m. Saving in Steel

In the light of the experience gained at Stoke Newington and more particularly at Ashford Common, the design of the main was reviewed. It was decided to increase the nominal internal diameter to

A number of shafts varying in depth between approximately 67½ft. and 192ft. have been sunk along the route of the main for construction and maintenance purposes. The terminal shaft at Lockwood is 67½ft. deep and has a diameter of 25ft., that is, 13ft. greater than that of the others, in order to accommodate the pumps. Electric motors, meters, main switches and fuses are conveniently arranged above ground. The water is carried through each of the intermediate shafts in a large diameter steel pipe, fitted with covered access branches. Stairways and landings are provided in the shafts and the normal cover consists of a reinforced concrete slab provided with separate access manholes for personnel and equipment.

The depth of cover over the main is in general more than 100ft. but owing to the reduced thickness of the London clay in the Lee Valley, only about 50ft. or 60ft. of cover is present east of Stoke Newing-

ton, the main and discharge it into this reservoir when required.

The main is designed to carry 120,000,000 gallons of water per day but at first it is not expected to be used at a greater rate than 70 m.g.d.

Construction Method

The shafts, conveniently situated at intervals of between three-quarters to one mile along the route of the main, were constructed by hand mining the material from the area enclosed by the shaft and underpinning with rings formed of either reinforced concrete or cast-iron segments bolted together. The internal diameter of each shaft, except the one at Lockwood, is 12ft. widening out to 15ft. at the junction with the tunnel.

For driving the tunnel the special form of shield, developed in connection with the experimental section, was used which pushed the segments of the ring home and tightened them into position against the clay, severe space restrictions leading to major departures from previous design. The device is essentially a very strong circular steel cylinder whose outside diameter is that of the external diameter of the tunnel lining segments. The primary function of the shield is to cut a circular hole of an exact diameter in the clay; its secondary function, as its name implies, is to shield the workmen engaged in driving the tunnel.

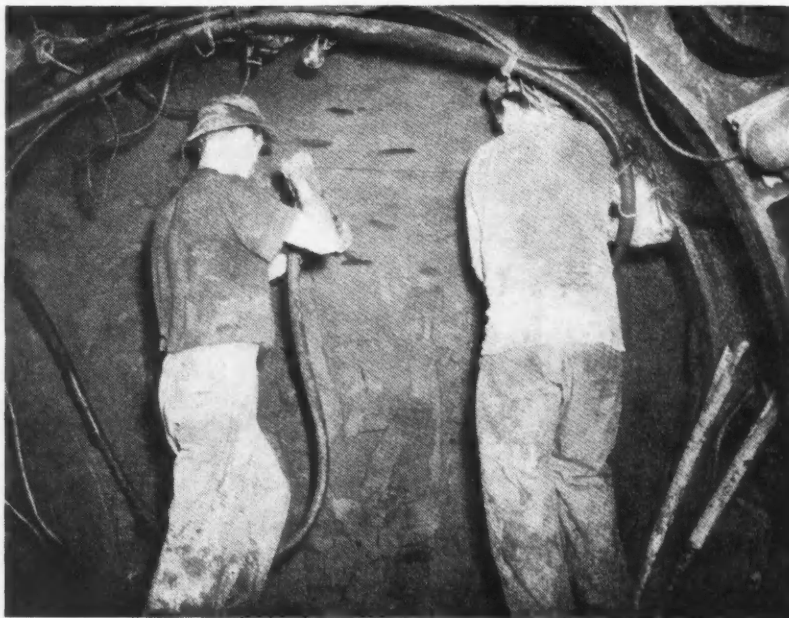
The shield was pushed forward by 12 hydraulic rams, one to each segment in the lining ring, aligned so that their heads moved parallel to the axis of the shield when under pressure and positioned so as to distribute their thrust uniformly across the radial width of the lining. The forward or leading edge of the shield was provided with a cutting edge having a bead projecting beyond the surface of the shield to make allowance for the expansion of the clay when its face was exposed prior to the erection of the lining.

Types of Lining

Two types of concrete segment linings were used for the 102in. internal diameter tunnel, the Don-Seg and Wedge Block. In the former there were 12 segments all of which were wedge-shaped and interchangeable. They were placed alternately broad face followed by narrow face forward and thus each second segment acted as a key which, when forced home by the appropriate ram, expanded the ring against the clay. In the Wedge Block type each ring consists of one key segment where the longitudinal faces are tapered to form a wedge, two wide segments with one longitudinal face tapered to match the key, and nine parallel-sided segments. Thus in this type of lining there is only one key segment which when forced home by a ram tightens the ring against the clay. No reinforcement was used in either of these types of lining and no bolts were required to hold them in position in the ring. Bolted type segments were used for the relatively short lengths where ground unsuitable for the use of unbolted types was encountered.

Excavation of the clay was carried out by miners, using pneumatic spades, to a diameter several inches less than that of the shield and for a distance equal to the length of a ring ahead of the cutting edge of the shield, leaving a rim of clay a few inches wide to be cut off during the forward shove of the shield. The excavated clay was loaded into skips. When loaded the skips were hauled by an electric battery-operated locomotive along the already completed tunnel to the working shaft up which they were lifted by a crane and the clay was tipped into a muck hopper above ground, the hopper being suitably raised to enable easy loading of the lorries for transporting the clay to a tip.

When the excavation of the clay for a distance equal to the length of a ring (generally 24in.) had been completed, the rams of the shield, which had during this stage been bearing on the edge of the last



Clay excavation at the working face

102in. and to construct it at such a depth that the water from the Thames would flow by gravity to a terminal shaft near Lockwood reservoir whence it would be pumped to the several storage reservoirs in the Lee Valley. This resulted in a very considerable reduction in pumping costs, and the lowering of the water pressure in the tunnel which was effected enabled the steel pipes to be dispensed with, giving a saving of some 20,000 tons of steel, and about £1m. in cost.

Route of Main

With a total length of 33,239yd., the main follows an almost direct route from an intake at Hampton to the Lockwood shaft, Walthamstow, passing beneath Bushy Park, the river Thames near Teddington Lock, Ham Common, Richmond Park, Barnes Common and the Barn Elms reservoirs. Crossing the Thames again below Hammersmith Bridge it passes close by Olympia, beneath Paddington Station and Lords Cricket Ground to Barrow Hill works, whence its course lies under Holloway Prison, Stoke Newington works and Stamford Hill to Lockwood reservoir. From this point two 54in. diameter mains, laid in trench, convey water northwards, one into the High Maynard reservoir and the other terminating at the Chingford South pumping station, whence the water will be pumped into either the William Girling or the King George's reservoirs. Branches from this main connect into the Lockwood and Banbury reservoirs.

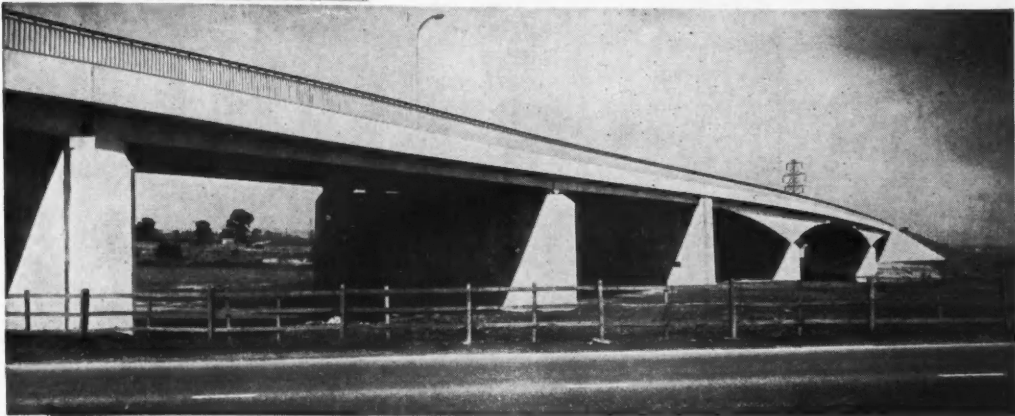
ton. A telephone cable will be laid along the tunnel for control purposes.

Instead of the usual form of inlet with large penstocks or gates, large areas of moving parts and high cost of maintenance at the Hampton works, the water from the Thames passes to the main through siphons (three were found convenient), formed of concrete and capable of being started and stopped at will. The only moving parts consist of hand-operated valves of the type used in distribution mains, none having a diameter of more than 6in.

At the terminal shaft at Lockwood six pumps of the vertical spindle borehole type with weatherproof motors, each having a capacity of 25 m.g.d., have been installed, three working against a head of 44ft. for supplying water to the High Maynard reservoir and the remaining three working against a head of 88ft. for supplying water to the Chingford South pumping station or to Lockwood and Banbury reservoirs. These units will be driven by purchased current transformed down from 11,000-V to 3,300-V. The plant is remotely controlled from the Ferry Lane works and is the first "outdoor" pumping station to be constructed by the Board.

In addition to the pumps in the terminal shaft at Lockwood a vertical spindle borehole type pump with weatherproof motor, having a capacity of 12.5 m.g.d., has been installed at shaft No. 18, which is adjacent to the West reservoir at Stoke Newington works. This pump will lift water from

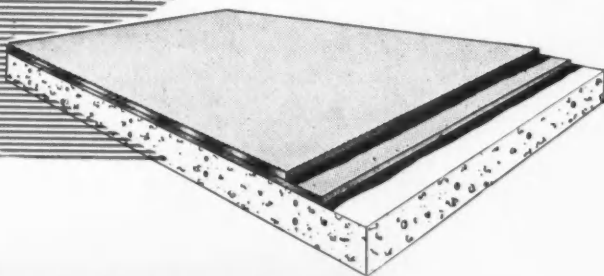
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CUT IN BUILDING ACCIDENTS "AN URGENT NEED"

CRITICISM OF LACK OF PRECAUTIONS

That an "urgent and immediate need" exists for an improvement in the accident record of the building and civil engineering industries is the main conclusion in a Ministry of Labour report on safety and health in the industries, published yesterday.

In an introduction to the report, Mr. T. W. McCullough, Chief Inspector of Factories, writes: "There are still far too many accidents on construction work and employers and operatives alike must continue to use every endeavour if real progress is to be made in making the industries safer." The most encouraging development in recent years, Mr. McCullough continues, has been the setting up of a number of safety training centres.

In the years under review, 1954 to 1958, the report itself noted that the number of accidents at building operations had risen from 13,903 in 1954, of which 172 were fatal, to 15,017 in 1958, with 207 fatalities, both figures being the highest recorded. Similarly, the figures at works of engineering construction were 2,172, of which 42 were fatal, in 1954, and had risen to a peak of 2,329 and 51 respectively in 1958.

MANY FALLS

Falls from working places provided the highest number of deaths at building operations. These were usually due either to a lack of guard rails and toe boards, or to working platforms of an inadequate width.

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Referring to the careless handling of explosives in demolition work, the report suggested that the manner in which explosives were used was sometimes "extremely slack."

Standards of welfare varied greatly from site to site and from employer to employer. The report noted that many building sites were poorly equipped with first-aid requisites in contravention of existing regulations. Messroom standards did not appear to have improved greatly. At some smaller sites "the most rudimentary shelters." A number of contractors, however, had successfully used mobile trailers as kitchens and canteens before permanent site buildings had been erected.

Report on Safety and Health in the Building and Civil Engineering Industries 1954-1958 (Cmd. 953, Stationery Office, 1s. 6d.).

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completed ring and in the retracted position, were operated by hydraulic pressure and the shield pushed forward so as to cut the rim of clay and leave behind a clean surface ready for the erection of the next ring. The rams were then retracted and the segments, which had been brought up the already completed tunnel on flat bogies while the excavation had been taking place, were manhandled into position against the exposed surface of the clay. In the case of the Don-Seg type, alternate segments had their wide ends pressed against the previously tightened ring, and the others their narrow ends towards but 4in. from the edge of this ring. Segments in the top half of the ring were temporarily supported by being wedged off steel bars projecting out from the back of the shield, and the ring was then expanded and tightened by operating the rams to drive home the six key segments.

In the case of the Wedge Block type of lining, which was used for a length of about 1,000yd. of the tunnel, the same procedure was used with the exception that all segments except the key were placed in position with their ends against the end of the previously constructed ring and the tightening was achieved by driving home the key segment at the top.

After a ring had been completed excavation was recommenced and the cycle of operations repeated to build the next ring, and so on.

Rotary Shield

A rotary digging shield for use with the Don-Seg type of lining was also developed by Kinnear, Moodie and Co., Ltd., and was used for the construction of about 9,000yd. of the tunnel. The forward end of this shield was provided with radial cutting blades which were rotated as the shield was pushed forward by the rams, cutting and lifting the clay so that it fell into a hopper from which it passed on to a belt conveyor which discharged it into a skip. When the shield had been pushed forward a distance equal to the length of one ring the cutting blades were stopped, the belt conveyor was moved backwards out of the way and the rams were retracted so that the erection of the ring could be proceeded with in the same manner as previously described. With this type of shield as much as 360ft. of tunnel could be constructed in one week when in good ground, which was about twice the rate which could be made with the shield for hand digging in similar ground.

Tunnelling, which began in February, 1955, and was completed by June, 1959, was carried on in both directions from most of the shafts and when the drives from adjacent shafts approached each other, a shield dismantling chamber, of 13ft. 6in. internal diameter and lined with bolted type segments, was constructed. In this chamber a mass concrete cradle, with

longitudinal steel rails partly embedded in its upper surface, was erected in the invert and the two shields were driven on to it in succession. There they were dismantled to enable them to be transported along the tunnel and up the shaft for further use.

To keep the alignment of the tunnel true to the desired line and level involved very accurate surveying and also the skilled manipulation of the rams in order to correct any errors in the line followed by the shield. As an adjacent shaft might be hidden by buildings it was necessary, in order to continue the line of the tunnel, to carry out a traverse, involving a measurement of the lengths of lines and their angles in relation to the centre line of the tunnel, along the intervening roads and streets.

The final operation comprised the lining of the main with a $\frac{1}{2}$ in. thickness of mortar applied by machine so as to leave a smooth surface which will keep the resistance to flow of the water in the tunnel to a minimum.

Consultants and Contractors

The total cost of the scheme amounts to about £4,300,000. Design and supervision of the civil engineering works was carried out by Sir William Halcrow and Partners, London, S.W.1, in collaboration with the Board's chief engineer, Mr. H. F. Cronin, until his retirement in May, 1959, and then with his successor, Mr. W. M. Lloyd Roberts. The chief engineer was responsible for the installation of pumping machinery.

Among the principal contractors were the following: tunnel contracts, No. 2 (Campden Hill to St. Pancras); No. 4 (Hampton Intake to Richmond Park); and No. 5 (Richmond Park to Kensington)—Kinnear, Moodie and Co., Ltd.; tunnel contract No. 1 (Islington to Stoke Newington, Hackney to Lockwood)—A. Waddington and Son, Ltd.; tunnel contract No. 1A (Stoke Newington to Hackney)—Balfour, Beatty and Co., Ltd.; 54in. pumping mains—Wm. Press and Son, Ltd.; lining of tunnel and 54in. mains—Turriff Construction Corporation, Ltd.; pumping machinery, etc., at Lockwood and Hampton shafts—Harland Engineering Co., Ltd.; pumping machinery at Stoke Newington and Barn Elms shafts—Hathorn, Davey and Co., Ltd.; cranes at Lockwood, Stoke Newington, Barn Elms and Hampton works—John Smith (Keighley), Ltd.; telephone cable along tunnel, and instruments—British Insulated Callender's Cables, Ltd.; power and control cables at Lockwood shaft—George E. Taylor and Co. (London), Ltd.; switchgear and transformers at Stoke Newington and Ferry Lane works—Brush Electrical Engineering Co., Ltd.; shafthead building at Barn Elms—Robert Hart and Sons, Ltd.; valves—Guest and Chrimess, Ltd.

ACCIDENT SURVEY REVEALS HIGH FREQUENCY FIGURES

A MAN working on building sites in the London area can expect five serious accidents in the course of his working life. That is the conclusion of an accident frequency survey recently completed by Mr. F. D. Mann, safety officer, Wates, Ltd., according to the current issue of *Wates News*.

Breaking down all lost time accidents by areas and locations, and relating them in terms of working hours lost to the average working life in the building industry, the analysis points out the terribly high number of accidents each man in the company may expect to suffer—if the current rate of accidents is not controlled and reduced.

While sites in the London area have an expectation of five accidents per man, the Birmingham sites have an expectation only slightly better at 4.7.

Wates Built Homes sites, calculated separately, have an expectation of 4.7 accidents per man, and there is a similar figure for the Bedford plant of Modular Concrete Co. The frequency rates for maintenance department and plant yard work out a little better at 3.6 and three. The average for the whole company is 4.8.

Average Working Life

The figures were drawn up to the end of the first half of this year. Mr. Mann expects the end-of-year figures to provide even more interest because they will be compared with figures from building firms of similar size to Wates. The frequency rate is carefully calculated on the International Labour Organisation formula. Men directly employed by subcontractors on Wates sites are not included. Average working life in the industry is reckoned to be 100,000 working hours.

FIRE SERVICE BUILDING

Lack of Progress Deplored

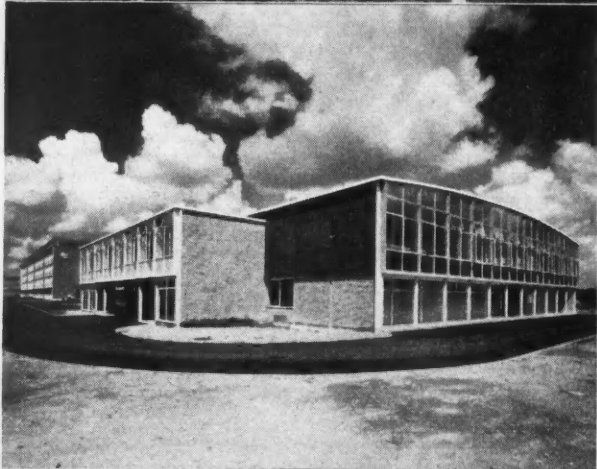
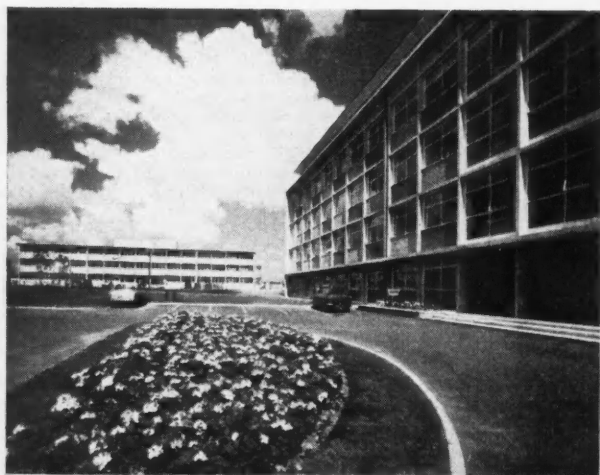
Mr. J. A. Broadbent, chief fire officer of Wiltshire, said in his recent presidential address at the annual conference of the Chief Fire Officers' Association, that many fire stations were bad for public relations, unfair to officers and men, a deterrent to recruiting and a drag on operational and administrative efficiency.

The lack of progress with fire service building had brought disappointment and frustration to fire authorities and desperation to chief fire officers trying to cope with the problem on an annual budget.

"We must have support in our building problems if we are to maintain a reasonable standard of efficiency," he said.



An artist's impression of the £16m. Severn suspension bridge, which should be completed by 1965-66. As reported last week, the Ministry of Transport is now inviting tenders for the construction of the substructure of the bridge and of access roads to the site. Erection of the bridge superstructure and the building of the Wye Bridge and eastern and western approach roads will be carried out by further contracts. The consulting engineers are Mott, Hay and Anderson, in association with Freeman, Fox and Partners. Sir Percy Thomas is the consulting architect.



(Top left): Reactor Group offices with health physics building in rear
 (Centre left): The canteen
 (Bottom left): Entrance hall of the restaurant

(Top right): Reactor Group offices
 (Centre right): Reactor Group offices with garden car park
 (Bottom right): The social club

CONSTRUCTION AT WINFRITH

THE development of the Atomic Energy Establishment at Winfrith, Dorset, for the United Kingdom Atomic Energy Authority has proved a formidable challenge to both designers and contractors. But, as a recent visit to the site by *The Contract Journal* showed, this challenge has been more than met during the three years the project has been in progress.

The major portion of the Winfrith site was water-logged peaty heathland, scarred by wartime battle training and devoid of any shelter from the weather. Now stand reactors, reactor halls, administrative offices and a host of other buildings, while other developments such as the "Dragon" project described in our issue of August 18, 1960, are under construction. The building and civil engineering contractors, Turriff Construction Corporation, Ltd., have successfully maintained the programmes set and found solutions to the many problems that have constantly arisen from the difficult site conditions and from the continual revisions of planning and design that are inherent in the development of an advanced experimental establishment. This development is continuing and Turriff have recently obtained further contracts covering the construction of the Zebra reactor and ancillary buildings, the main engineering/administrative block and several buildings known as phase 3.

The whole of the construction programme is under the control of Mr. T. L. Viney, F.R.I.B.A., director of works and buildings, U.K.A.E.A., with Mr. R. S. Brocklesby, A.R.I.B.A., chief architect, responsible for the planning and design of all buildings. The resident engineer is Mr. T. G. Williams, and the Turriff team is led by Mr. L. S. E. Phillips.



Heavy reinforced concrete foundations for "Dragon" reactor



View of the Atomic Energy Establishment, Winfrith, from the south-east

John Sumner's Notebook . . .

THERE was little at the annual conference of the Trades Union Congress of significant importance to the building industry, with the possible exception of Mr. Harry Weaver's virtually echoless call for its nationalisation. The reports of his speech published in the newspapers showed that the arguments he advanced in support of the motion down in his name were not greatly dissimilar from those made in past speeches on this subject. In fact, I rather gained the impression that he searched for and used phrases and arguments which were more likely to hit the headlines than to give solid backing to the motion. I have been wondering since whether this was intentional.

As on previous occasions when this subject has been to the fore at the T.U.C. and building unions' conferences, the building industry proved to be an easy one to attack. After all, every job it does is as good as tailor-made, on a different site and with a different labour force. It is not surprising that there are occasions when, from the eye level of building operatives, there appears to be a certain lack of organisation, a certain amount of room for improvement in the sequence or order of operations. But because some building operatives think that the building industry is not so efficient as it might be it doesn't mean that there is a case for nationalisation. It would give no greater guarantee of improved efficiency anyway. I suspect that Mr. Weaver knows this as well as I do. Why, then, did he speak so disparagingly of his industry to his T.U.C. colleagues in the Isle of Man? The answer is a long and involved one and is not unconnected with the political turmoils, of both national and domestic complexion, now being experienced in the building unions.

The regrettable thing about the T.U.C. motion, which was approved without comment, is that it had to be handled by Mr. Weaver. The things he said cannot be expected to please the building employers. Yet next month, if the usual pattern of things is followed, he and his other colleagues of the N.F.B.T.O. will be negotiating with the employers for better wages and working conditions. The employers will be expected to look upon the operatives' submissions if not with benevolence then with understanding and sympathy. Mr. Weaver's efforts in the Isle of Man cannot be said to have encouraged the employers to display these feelings. Still, there are some long-heads among the employers and it may be that the rather false position Mr. Weaver found himself in at the T.U.C. conference will be understood. I hope so, anyway.

MR. FRANK BEAZLEY, the Clerk to the National Joint Council for the Building Industry, has kindly sent me a copy of the 1960 report of the National Joint Apprenticeship Board. It contains some interesting facts and figures on recruitment and indenturing. Throughout its pages I have no difficulty in recognising the restraint used by Mr. Harvey G. Frost, the chairman of the Board, in seeking to excuse his fellow builders who fail to indenture apprentices in the proper way or who, worse still, do not engage apprentices at all.

I wonder how long the industry is going to allow this near farce to continue. A million and a half men are employed in building, the industry is busier today than possibly at any other time in its history, the prospects for the future have never been paralleled in brightness and yet less apprentices were registered and indentured

last year than in 1953. In fact, 1959 showed the lowest figure of any year in the last seven.

The curious thing is that there seems to be no falling away in the number of boys entering the industry to train as craftsmen. This clearly means that a number of young men are receiving, at best, a haphazard form of training at the conclusion of which they will have no chance of getting indentures which will establish beyond all doubt their competence in their chosen crafts. These lads are not themselves to be blamed. The real culprits are either their parents, who allow them to be employed under such unsatisfactory conditions, or the employers who engage them without any intention of shouldering their responsibilities both to the industry and the boys they engage.

It seems to me that there is a big job here for the N.J.A.B. It has got to preach the gospel of properly indentured apprenticeships not only with the employers but in the other spheres where it is likely to bring results. I mean the youth employment officers and the parents of those lads contemplating building as a career. As the report says, the National Apprenticeship Scheme (which is a first-class one) must be fully implemented, and that means that all lads under training must be properly indentured under an approved written deed and registered with the Board. It is one of the best ways I know of making building a more attractive industry.

The alternative is just around the corner. It is one that building employers are unlikely to welcome. Mr. John Hare, the Minister of Labour, is thinking about it now—a compulsory levy on all industry to provide training schemes so that the extra number of school leavers resulting from the "bulge" will have a chance to acquire technical skill to fit them for a useful branch of industry. Once such a scheme is introduced, my guess is that it will be difficult to get rid of it and employers will be paying the levy for the rest of their natural lives. So far as building employers are concerned, they can best avoid the imposition of such a levy by using the National Apprenticeship Scheme and by ensuring that the apprentices they engage are not merely apprentices in name only but are properly registered and indentured.

THREE items of news in the last few weeks suggest to me that the architectural profession has got some important things to think about: the Lanarkshire County Council do not propose to employ any more private architects because their fees are twice as high as the operating costs of the County architectural department. The R.I.B.A. say that it is impossible to compare the different rates of commission because private architects have higher overheads to carry. A strange comment this, because there seems to be a parallel between the decision of the Lanarkshire County Council in respect of architects and the policy of a much larger number of local authorities in employing their own direct labour departments for building work. The builders argue that the overheads of local authority direct labour departments are not always or not adequately charged to the jobs undertaken by them. They are probably right. Overheads are a necessary charge on any enterprise. It is the scale of them which largely determines the level of efficiency. It will be a sad day for architects in private practice if other local authorities follow Lanarkshire's example. If they do the R.I.B.A. will have to find some better and

more cogent arguments. The builders should be able to help.

In Edinburgh the Corporation have given to building contractors the job of re-developing sites at present occupied by 4,000 temporary houses. The cost is expected to be about £18m. The contractors will employ their own architects and surveyors.

The architects in Edinburgh are up in arms and the Edinburgh Architectural Association has asked the Corporation to receive a delegation. Mr. Percy Johnson-Marshall, senior lecturer in the Department of Architecture at Edinburgh University, has told *The Guardian* that schemes costing £18m. demand high-level thinking and planning as they would change the face of Edinburgh. Such schemes would normally go either to open competition or to a top-ranking architect. Handing the scheme to a contractor, he says, gives no guarantee that he would take professional advice on design or planning.

This is the old story. Contractors employ architects, properly qualified men, and then their professional colleagues seek to denigrate them and rob them of their professional status. I have written on this topic before. The architects in private practice cannot have it both ways. If a man satisfactorily passes his examinations to qualify as a competent architect then it must be appreciated that he remains one whether he sets up in private practice or takes employment with a local authority or a building contractor. It makes no difference to his thinking or ability. The Edinburgh Architectural Association may feel aggrieved but they must be realistic.

The third item is a comment by Lord Taylor, medical director of Harlow's Industrial Health Service and a member of its Development Corporation, in an article on hospital design in the *British Medical Journal*. In the article he warns doctors: "Remember, the architect and his professional colleagues are paid on a percentage basis. So the more the buildings cost the greater are their profits."

Is this why Edinburgh Corporation took the decision it did?

BEING away on holiday I missed the opening of the Homefinders New Homes Show, at Central Hall, Westminster. I would have liked to have heard Mr. R. Graham Page, M.P., the chairman of the Conservative Members' housing committee, saying his piece on land availability. Only the day before the Minister of Housing had sent a circular to planning authorities asking them to consider whether more land needs to be allocated for housing. Said Mr. Page: "To consider whether" is a mild phrase. I would have said "Get off the fence. Make up your minds. Mark up much more of that white land on your plans for housing—at densities which face the facts."

It is to be hoped that planning authorities take note of Mr. Page's down-to-earth language. There are signs that planning authorities have merely spiced Mr. Brooke's circular and have little or no intention of doing anything about it. This, at any rate, is the impression slowly taking shape among outsiders and I wouldn't be surprised if, before long, the planning authorities get a rude awakening. Neither the housebuilders, nor the architects, nor the operatives, nor indeed the Minister himself are going to let the matter rest there. The sensible planning authorities, I think, will be those which act on the circular now.

ARMY CAMP PURCHASE

The Laing Housing Co., Ltd., have bought a disused army camp at Marske-by-the-Sea, Redcar, for £15,750.

Occupying nearly 12 acres, the former Zetland Camp adjoins the western boundary of the private housing estate which the company is now developing at Marske.

CLACTON SEA DEFENCE WORKS COMPLETED

New Sea Wall at Holland Gap

THE completion of coast protection works at Clacton-on-Sea, for Clacton Urban District Council, was marked last week with a ceremony performed by the Minister of Housing at Holland Gap.

Prior to the last war, the greater part of the 6.8 miles of coastline within the urban district was protected by either timber or mass concrete walls of various designs, the remainder having no protection at all. Scouring of the beach in front of these walls, particularly at Holland Haven, caused their collapse and consequent erosion of the cliffs, endangering the houses and a private concrete road on the cliff top.

War-time Scheme

A scheme prepared at this time, and based on principles which had proved successful, contained proposals for mass concrete groynes, 400ft. long, spaced at 1,000ft. intervals along the length of the proposed mass concrete sea wall, with two intermediate reinforced concrete pile and plank groynes, approximately 250ft. long, between each large groyne.

With the outbreak of war, the scheme had to be abandoned, but the rate of erosion increased to an alarming degree. About 150ft. depth of cliff was lost at one point east of Holland Gap in a period of less than four years, and there was a danger of the sea breaking through to the low-lying land north of Holland Gap. In spite of the fact that the war was in progress, Ministry approval was received for the erection of 33 reinforced concrete groynes, spaced about 330ft. apart along the length of coastline then in private ownership. This scheme was successful in limiting the erosion to periods of extraordinary high tides.

After the war, the original scheme was modified and it was decided to construct a sea wall of reinforced concrete sheet piles between the existing lengths of mass concrete wall which had been constructed in the mid-twenties. Six mass concrete walls, each 310ft. long, were also proposed, but for economy reasons only two of these were authorised.

Known as Holland Sea Defence Scheme No. 1, it provided for the coastline from Hazlemere Road to Southview Drive, a distance of about 1,975yd.

The sheet piles used in this scheme were 13in. by 7in. in section, and reinforced with four $\frac{3}{4}$ in. and two $\frac{1}{2}$ in. diameter bars. The length of the piles was 21ft., and the

exceptionally high tide. Non-return valves were provided to prevent the sea gaining access through the manhole outlets. The height of this wall was designed at 14.00 O.D., well above the level of the highest recorded tide at that time of 11.40 O.D.

Early in 1953, the sheet pile wall was



Finished section of wall deck, showing concrete sheet piles

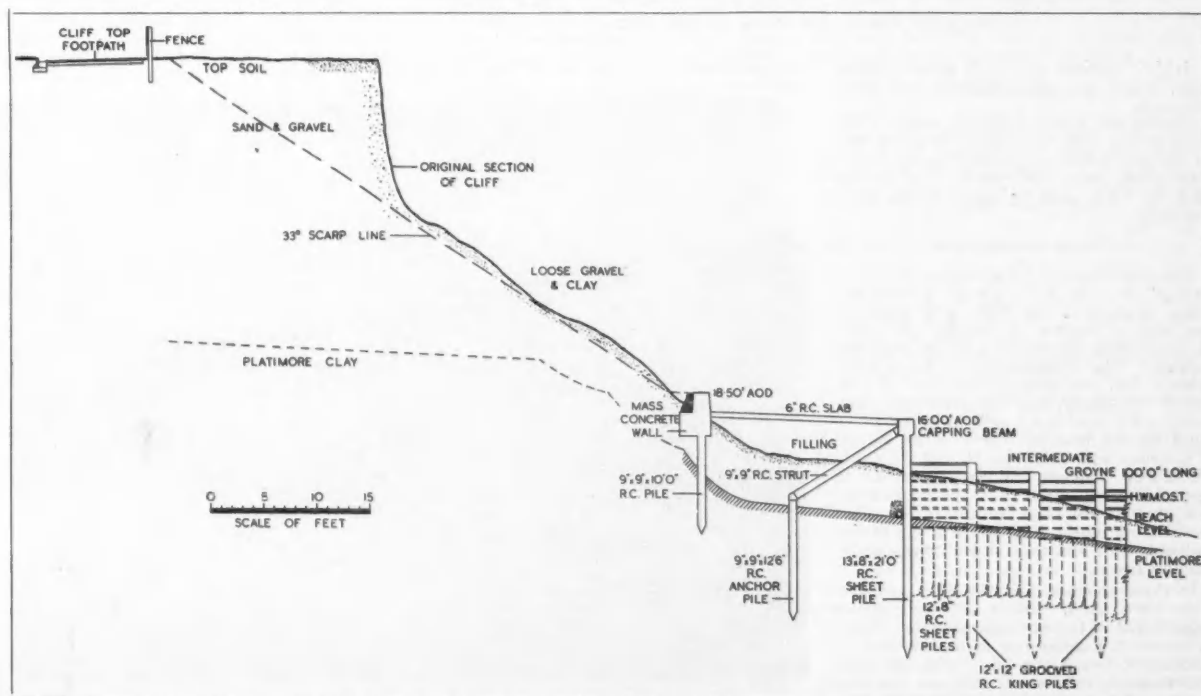
penetration into the platimore clay averaged 12ft.

Two 9in. by 4in. timber walings, one on each side, run along the face of the sheet pile wall, which is secured to 9in. by 9in. by 10ft. long timber anchor piles at the rear of the wall by two 9in. by 3in. timber struts at each eleventh pile. The anchor piles are driven at least 8ft. into the platimore.

Porous drains were provided at the rear of the wall to collect the sub-soil water from the cliffs, discharging over the platimore clay surface and also any sea water which found its way over the wall at

overtopped for the whole of its length by the tidal surge, causing erosion of the foot of the cliffs. As a result, it was decided to provide a small concrete cliff-retaining wall at the foot of the cliffs to a height of 17.5 O.D. and an impervious area between this and the sheet pile wall.

The scheme which has now been completed protects the remaining length of coastline between Southview Drive and Holland Haven, a distance of about 1,100yd. Called the Holland Sea Defence Scheme No. 2, it was amended in the light of past experience, and provides a reinforced concrete sheet pile sea wall with



Scheme No. 2: Typical cross-section of cliffs showing details of works

a concrete impervious area at the rear and a small concrete cliff-retaining wall. The highest recorded tide (February, 1953) was 15ft. 6in. above Ordnance Datum (Liverpool), with a wave of approximately 2ft. On the present scheme, the height of the sea wall is 16ft. above O.D., and the top of the cliff-retaining wall 18ft. 6in. above O.D.

In this latest scheme the use of timber walings, struts and anchor piles was omitted and reinforced concrete substituted. All sheet piles and anchor piles were cast and driven with the top 7in. of the main reinforcement exposed, and the piles were held together laterally by the construction in situ of a reinforced concrete capping beam.

Precast 9in. by 9in. reinforced concrete anchor piles, 12ft. long, were driven behind the sheet pile wall at 12ft. 6in. centres to a depth of approximately 10ft. into the platimore, and reinforced concrete precast concrete struts, 9in. by 9in. by 12ft. long were used to connect the sheet pile sea wall to the anchor piles. In-situ concrete joints over the bared reinforcement were made between anchor pile and struts, and struts and capping beam, respectively. The 21ft. long reinforced concrete sheet piles in the sea wall were increased in size to 13in. by 8in. to provide greater cover over the reinforcement, which consisted of six $\frac{3}{4}$ in. diameter mild steel bars. All piles, planks and struts were cast on site, using



General view of site during construction

and the heads of the piles were then bared to expose the reinforcement to enable a horizontal capping beam to be constructed. As far as possible the underside of the

horizontally and held in position by the grooves in the king piles. The planking can be adjusted to suit variations in beach level.

A total of 7,200 reinforced concrete piles and 1,800 reinforced concrete planks were involved in the Holland No. 2 scheme, and the volume of concrete amounted to 6,000 cu. yd. Six hundred tons of steel was used, and 15,000 cu. yd. of earthmoving works were carried out. The cost is estimated at £224,000.

Taking two and a half years to complete, the scheme was designed by Mr. N. R. Kinlay, engineer and surveyor to Clacton Urban District Council. The contractors were May, Gurney and Co., Ltd., Trowse, Norwich.

"THE ARCHITECT AND THE BUILDING CONTRACT"

Five lectures on "The Architect and the Building Contract" are to be given by Mr. Donald Keating at The Building Centre, Store Street, W.C.1, at 6 p.m. on Tuesday evenings beginning November 1.

The course, which has been arranged by the Brixton School of Building, is intended primarily for building contractors, but architects and others concerned with contracts will find it of interest.

Applications for places should be made to the Secretary of the Brixton School of Building, Ferndale Road, S.W.4 (Brixton 0944). The fee for the course will be £1.



Drain under construction at rear of main wall

a 1:1½:3 nominal mix with granite aggregate, which was weighbatched and poked vibrated.

Expansion joints were provided every 25ft. in the cliff-retaining wall; every 30ft. in the 6in. reinforced concrete slab in the impervious area; and every 50ft. in the 18in. by 18in. capping beam to the sheet pile wall.

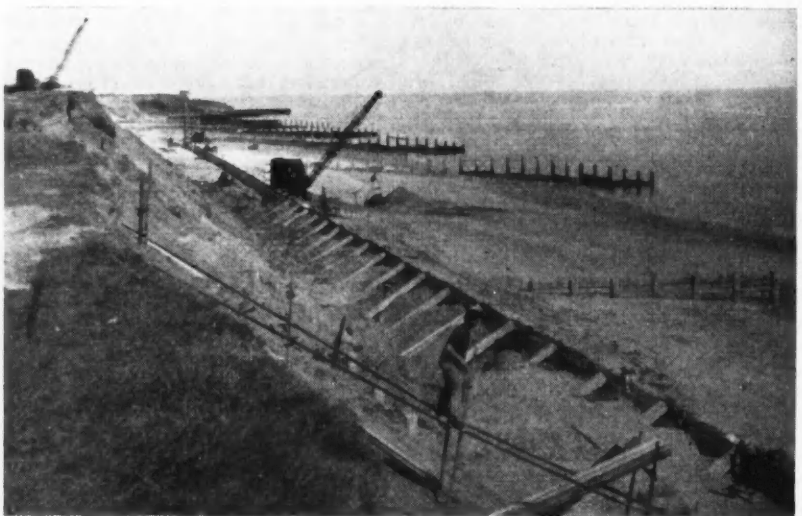
Groyne Construction

The movement of beach material on this part of the coast is from east to west, and when erosion of the cliffs took place to the east a source of supply of beach material along the coastline to the west was formed. The completion of the present scheme had the effect of cutting off this source of supply, and in order to compensate for this factor and in an effort to build up the beaches, the existing system of groynes was improved by the inclusion of 31 new groynes and the extension of certain existing ones. Twenty-seven of the new groynes are sited equidistant between the existing ones along the frontage of the Holland Cliffs and four at points along the Clacton Front.

In these groynes, 12in. by 12in. grooved piles were used, similar to the groynes constructed in the war-time scheme. There is, however, a difference in the method of planking between the piles. In this case intermediate reinforced concrete vertical sheet piles were driven into the platimore,

capping beam conformed to the level of the platimore clay below the beach material.

Above the capping beam level precast reinforced concrete planking is placed



Completed concrete sheet piling

BRITAIN'S FIRST "MOVING PAVEMENT"

Travolators Opened at the Bank Station

THE new Bank Travolators which now link the Southern Region Waterloo and City line platforms with the high-level circulating area and Bank underground station, were officially opened last week by the Lord Mayor of London, Sir Edmund Stockdale.

This is the first "moving pavement" in Britain, but something like the installation might have been built more than half a century ago. In 1903, five years after the Waterloo and City line railway was opened, a Leeds firm prepared a scheme for an almost identical form of transporter for use on the site. It was abandoned probably because the tunnel was crooked. So passengers continued to toil up the 1 in 7.4 incline of the 340ft. long, 13ft. wide, subway assisted by five steps at 40ft. intervals which reduced the gradient to 1 in 14.

The war and post-war capital expenditure restrictions held back the implementation of the first scheme to eliminate this long climb—a three-way escalator for which Parliamentary Powers had been obtained in 1939. When in 1955 the Southern Region was able to tackle this long-standing problem it engaged a firm of consulting engineers to approach the matter afresh.

It was during the development of the scheme which they prepared—largely following the pre-war plan—that it became apparent that something similar to what the Americans call a "speed walk" would be cheaper and quicker to instal.

The Final Scheme

The plan finally settled on to instal two Travolators was also based on certain further advantages over the original scheme: it would carry the passengers farther than could escalators; the existing subway could be retained, and construction would involve far less interference either to passengers or to the existing drainage and services.

The version of the Travolators developed in this country for this scheme is, in fact, based on the Otis' escalators used by the London Transport Executive. At their maximum speed of 180ft. per minute, each can carry 10,000 people an hour up an incline of 1 in 7.

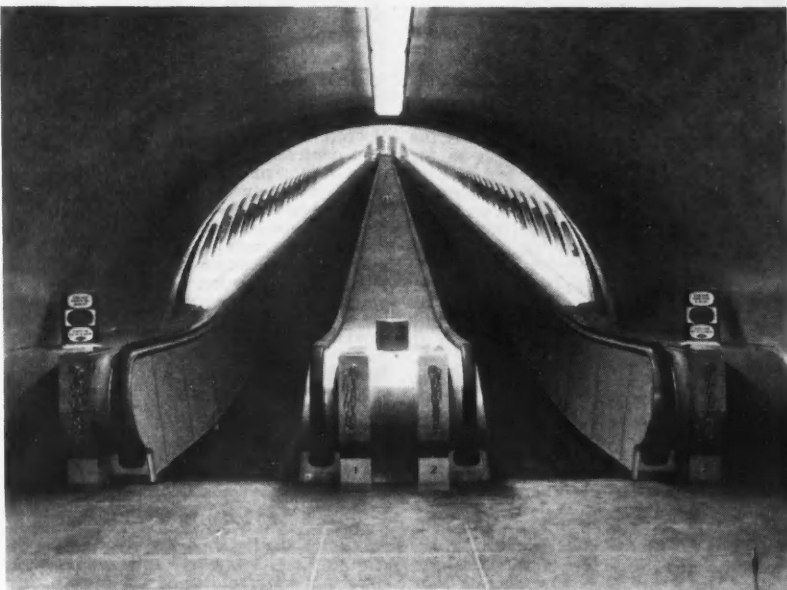
Despite the comparative economy of the scheme fairly massive works were necessary to enable the installation to be carried out and to take full advantage of it.

As finally approved in March, 1957, the scheme involved:

(a) The construction of a tunnel of 16ft. 6in. internal diameter opposite

(c) Substitution of the existing timber platforms by concrete, platform levels being raised 2½in. to make them 1ft. 8in. above rail level.

(d) Re-lining of platform tunnels and the existing subway including the provision of a false ceiling to take lighting cables, and provide drainage for seepage water.



A view from platform level

platform No. 2, running approximately parallel to the existing subway, housing two Travolators, each 4ft. wide, together with a machinery room and substation chamber.

(b) The construction of six new openings 9ft. in width, in the walls separating platforms 1 and 2 to facilitate the flow of passengers from No. 1 platform to the base of the Travolators.

(e) The diversion of all existing drains, cables and public services necessitated by the above works.

(f) The reconstruction of the high-level subways leading to Walbrook and Poultry, including a new ticket office and the provision of certain staff amenities.

It also provided for the re-lining and redecorating of the existing subway.

Construction

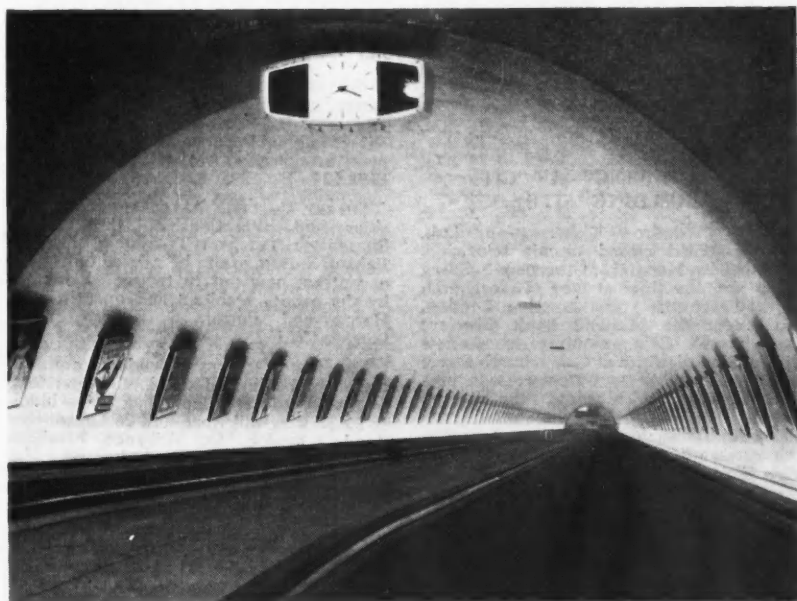
Work began in 1957 with the closing of the subways leading to Walbrook and Poultry. Between these two entrances a shaft was driven down to the level of the tunnel for the Travolators: from here an 8ft. pilot tunnel was driven down the incline and later enlarged to 16ft. 6in. in diameter. Excavation had to be carried out by night, the spoil hoisted out and removed by lorry until the line of the existing low-level siding tunnel was reached. It then became possible to remove spoil by wagons at night via Waterloo. Cast-iron segmental linings with lead caulked joints were used.

At the lower end this 282ft. tunnel was enlarged from 16ft. 6in. to 19ft. 6in. diameter for a further 52ft. to accommodate the lower landing and return machinery. Beyond this point it enlarges by another 10ft. in diameter for a distance of 19ft. 9in. to provide a circulating area for passengers arriving at the foot of the Travolators and from the existing subway.

At the same time six new openings, each 9ft. wide, were cut in the dividing wall between the two platforms to facilitate the flow of passengers, etc., to the base of the Travolators.

At the upper end of the Travolator tunnel the machine chamber and booking hall is approximately 100ft. long, 35ft. wide.

(Concluded on page 81)



Travolators looking from ticket hall

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Trust Local Initiative

"Many of these improvements could be made and put into operation quickly if local initiative were sufficiently trusted. Ministry approval is, however, required for grant earning expenditure and for the application of restrictions. Obtaining this requires long periods of negotiation and sometimes the result awaits experimental work elsewhere or consultation with the police and other bodies. More and faster progress could be made if the finance side of small local improvements could be made more flexible and additional or reserve funds were available to the Ministry for such purposes when occasion arises."

OXFORD BRIDGE LINK CONTRACT

As reported recently, a £310,000 contract for constructional work on the Donnington Road Bridge Scheme has been awarded to The Cementation Co., Ltd. Under the scheme the two southerly approaches to Oxford will be linked.

Apart from the main bridge, which will have a clear span of about 140ft. between abutments, Cementation will build two subsidiary bridges of 60ft. span over the backwaters, and half a mile of road together with embankments. The bridges will be of prestressed post-tensioned concrete construction.

The main bridge will be 55ft. in width overall. It will have a 30ft. wide road and two footpaths, each 10ft. in width.

The engineer for the project in respect of roadworks is Mr. J. Campbell Riddell, Oxford city engineer and surveyor. R. Travers Morgan and Partners are the consulting engineers for the bridgeworks.

The 1961 annual meeting and conference of the Institution of Municipal Engineers will be held at Brighton from June 13-17.

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and 30ft. deep. Because it lies in the filling over the Walbrook and its tributaries it was decided to use a reinforced concrete raft as a foundation.

To keep down interference with traffic overhead and the movement of passengers the construction of the walls was carried out in a series of headings driven round the sides of the chamber. The dumping and excavation for the floor were then removed and the floor constructed in strips as the excavation proceeded. The whole of the area of the booking hall and machine chamber was completely "tanked" with 1½in. asphalt applied hot.

The 3ft. reinforced concrete roof slab, which varies from 3ft. 6in. to 1ft. below the road surface, was constructed in strips about 8ft. wide in open trench. The road traffic during construction was carried on temporary steel decking which often had to be removed at night to allow construction to proceed and the roadway made good each time early enough to enable road traffic to proceed during the day.

About 10,500 cu. yd. of material was removed and some 5,000 cu. yd. of plain and reinforced concrete placed. Eight hundred tons of cast-iron segments were used in the construction of the tunnels.

Most of the cables and other public services were diverted by trenching in the roadway. But a 5ft. diameter sewer crossing the booking hall area had to be diverted by tunnelling a new 5ft. diameter drain of cast-iron segments lined with concrete and with an engineering brick invert,

An additional pipe subway with a new shaft had to be constructed under the main concourse and the London Transport Executive's main feeder track cables had, too, to be diverted.

The Equipment

The two Travolators, although similar in principle to the American "speed walks", are the first of their particular type in the world.

Using a continuous flat platform travelling at a lower angle of incline than an escalator, which is normally banked 30 degrees, they have an incline angle of 8° 07' 48" or 1 in 7. There is a vertical rise of 42ft. over an incline length of just under 297ft. The overall length, which includes horizontal portions at top and bottom landings, is just under 302ft. 6in. and is 40in. wide tapering out to 48in. at a point below the handrails.

The maximum speed can be adjusted for passenger traffic down to a speed of 90ft. per minute, and in addition to a "crawl" or "inching" speed of about 36ft. for maintenance purposes.

Each has its own drive unit in a motor room beneath the upper landing. It consists of a high efficiency worm gear with multi-start worm, connecting up a large diameter coupling to the shaft of a variable speed three-phase 85-h.p. commutator motor.

The Travolator tunnel has a false ceiling of Celacite corrugated waterproof lining to which is attached an inner lining of Stelvetite sheeting. The side walls

at the foot of the installation have a blue-grey mosaic vitreous glass finish.

On each side of the "travel strip" there is a shallow skirting with flat sloping panels above. There is deck panelling between each Travolator and between the tunnel side walls, of double armoured plywood with aluminium on the visible side and galvanised sheet steel on the reverse. The panels are faced with a grey-coloured plastic.

In the tunnel continuous fluorescent trough lighting is provided at deck level with a central trough of fluorescent lighting in the ceiling at the foot of the Travolators. Between the deck panelling adjacent to the tunnel lining provision has been made for the installation of specially designed lighting to obviate any glare from the aluminium "travel strips."

Engineers and Contractors

The scheme was developed and the whole of the work designed and carried out by Mott Hay and Anderson, the consulting engineers, under the general direction of Mr. A. H. Cantrell, B.Sc., M.I.C.E., chief civil engineer of the Southern Region, British Railways.

The contractors for the tunnelling and general engineering work were Mitchell Brothers, Sons and Co., Ltd., and the contractor for the supply and installation of the Travolators was the Otis Elevator Company. The electrical equipment, including the motors and control gear, was manufactured and installed by Associated Electrical Industries (Rugby), Ltd.

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—long overdue, the implementation of many more one-way streets, elimination of right-hand turns and other palliatives which will at least help in the short run until the capacities of our roads are increased to meet present and future requirements.

Trust Local Initiative

"Many of these improvements could be made and put into operation quickly if local initiative were sufficiently trusted. Ministry approval is, however, required for grant earning expenditure and for the application of restrictions. Obtaining this requires long periods of negotiation and sometimes the result awaits experimental work elsewhere or consultation with the police and other bodies. More and faster progress could be made if the finance side of small local improvements could be made more flexible and additional or reserve funds were available to the Ministry for such purposes when occasion arises."

OXFORD BRIDGE LINK CONTRACT

As reported recently, a £310,000 contract for constructional work on the Donnington Road Bridge Scheme has been awarded to The Cementation Co., Ltd. Under the scheme the two southerly approaches to Oxford will be linked.

Apart from the main bridge, which will have a clear span of about 140ft. between abutments, Cementation will build two subsidiary bridges of 60ft. span over the backwaters, and half a mile of road together with embankments. The bridges will be of prestressed post-tensioned concrete construction.

The main bridge will be 55ft. in width overall. It will have a 30ft. wide road and two footpaths, each 10ft. in width.

The engineer for the project in respect of roadworks is Mr. J. Campbell Riddell, Oxford city engineer and surveyor. R. Travers Morgan and Partners are the consulting engineers for the bridgeworks.

The 1961 annual meeting and conference of the Institution of Municipal Engineers will be held at Brighton from June 13-17.

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and 30ft. deep. Because it lies in the filling over the Walbrook and its tributaries it was decided to use a reinforced concrete raft as a foundation.

To keep down interference with traffic overhead and the movement of passengers the construction of the walls was carried out in a series of headings driven round the sides of the chamber. The dumping and excavation for the floor were then removed and the floor constructed in strips as the excavation proceeded. The whole of the area of the booking hall and machine chamber was completely "tanked" with 1½in. asphalt applied hot.

The 3ft. reinforced concrete roof slab, which varies from 3ft. 6in. to 1ft. below the road surface, was constructed in strips about 8ft. wide in open trench. The road traffic during construction was carried on temporary steel decking which often had to be removed at night to allow construction to proceed and the roadway made good each time early enough to enable road traffic to proceed during the day.

About 10,500 cu. yd. of material was removed and some 5,000 cu. yd. of plain and reinforced concrete placed. Eight hundred tons of cast-iron segments were used in the construction of the tunnels.

Most of the cables and other public services were diverted by trenching in the roadway. But a 5ft. diameter sewer crossing the booking hall area had to be diverted by tunnelling a new 5ft. diameter drain of cast-iron segments lined with concrete and with an engineering brick invert,

An additional pipe subway with a new shaft had to be constructed under the main concourse and the London Transport Executive's main feeder track cables had, too, to be diverted.

The Equipment

The two Travolators, although similar in principle to the American "speed walks", are the first of their particular type in the world.

Using a continuous flat platform travelling at a lower angle of incline than an escalator, which is normally banked 30 degrees, they have an incline angle of 8° 07' 48" or 1 in 7. There is a vertical rise of 42ft. over an incline length of just under 297ft. The overall length, which includes horizontal portions at top and bottom landings, is just under 302ft. 6in. and is 40in. wide tapering out to 48in. at a point below the handrails.

The maximum speed can be adjusted for passenger traffic down to a speed of 90ft. per minute, and in addition to a "crawl" or "inching" speed of about 36ft. for maintenance purposes.

Each has its own drive unit in a motor room beneath the upper landing. It consists of a high efficiency worm gear with multi-start worm, connecting up a large diameter coupling to the shaft of a variable speed three-phase 85-h.p. commutator motor.

The Travolator tunnel has a false ceiling of Celacite corrugated waterproof lining to which is attached an inner lining of Stelvetite sheeting. The side walls

at the foot of the installation have a blue-grey mosaic vitreous glass finish.

On each side of the "travel strip" there is a shallow skirting with flat sloping panels above. There is deck panelling between each Travolator and between the tunnel side walls, of double armoured plywood with aluminium on the visible side and galvanised sheet steel on the reverse. The panels are faced with a grey-coloured plastic.

In the tunnel continuous fluorescent trough lighting is provided at deck level with a central trough of fluorescent lighting in the ceiling at the foot of the Travolators. Between the deck panelling adjacent to the tunnel lining provision has been made for the installation of specially designed lighting to obviate any glare from the aluminium "travel strips."

Engineers and Contractors

The scheme was developed and the whole of the work designed and carried out by Mott Hay and Anderson, the consulting engineers, under the general direction of Mr. A. H. Cantrell, B.Sc., M.I.C.E., chief civil engineer of the Southern Region, British Railways.

The contractors for the tunnelling and general engineering work were Mitchell Brothers, Sons and Co., Ltd., and the contractor for the supply and installation of the Travolators was the Otis Elevator Company. The electrical equipment, including the motors and control gear, was manufactured and installed by Associated Electrical Industries (Rugby), Ltd.

CONTROLLING SHAREHOLDERS AND DEATH DUTY

FOLLOWING the publication of an article on this subject in our issue of August 18, 1960, "A Lawyer Considers . . . Controlling Shareholders and Death Duty," Mr. E. J. Sims of East Horsley, Surrey, writes:

The first two paragraphs brings one up with a jerk and sets a problem that is fraught with difficulties for principal shareholders of private companies. To pass over control to others by transferring the shareholding may be an easy way of endeavouring to minimise death duties but it is not the answer to a man's peace of mind where his inclination is to maintain his control. Would "A Lawyer Considers" be prepared to give the benefit of his knowledge (without prejudice) on a typical case:

A private company where the controlling interest is held 50/50 by two men who have built up a successful small business and have no wish to transfer their shareholding and control in order to minimise death duties, are worried that if either should die the business would suffer from the payment of death duties if demanded promptly. Are ordinary shares in this type of company valued at par for the purpose of probate; if not, how are they valued and what period of time would the administrators have for payment? Further, if the administrators are obliged to find money to pay duty and have to sell some or all of the shareholding, does the remaining controlling shareholder have a say in their disposal?

"A LAWYER CONSIDERS" replies:—

Estate or death duty is levied on the value of the property of the deceased at the date of death. Such property includes of course all shares he owns.

A person's property is divided up into real and personal estate; real estate is land and buildings; personal estate is all other types of property and thus shares are personal estate.

Upon death it is the duty of the personal representatives of the deceased to assess the value of the estate and submit their affidavit to the Inland Revenue swearing that to the best of their knowledge what they have inserted in the affidavit is the whole estate of the deceased and its value. Until this affidavit is lodged and the estate duty on that part of the estate which represents the personal estate is actually paid the personal representatives cannot obtain probate of the will or, if there is no will, get letters of administration. Interest at 2 per cent. is charged on the duty on the personal estate from the date of death until payment—no doubt to ensure prompt payment.

It will be seen that death duty has to be found fairly soon after the death on the personal estate; duty on the real estate,

presumably because it is more difficult to realise it, where necessary, is not payable until 12 months after the date of death.

Value of all property of the deceased is obtained by applying the rule that it is the price the property would fetch if sold in the open market at the time of the death. In regard to shares of the deceased in a family company then their value is their market price at date of death.

Clearly such shares, unlike those quoted on a stock exchange, have no immediately ascertainable value. Indeed they may very well never have been sold and the articles of the company will contain restrictions on their sale. To apply the valuation rule therefore it has been decided that in respect of such "restricted" shares their value is the price which would be given in the open market on terms that the purchaser should be duly registered as holder of the shares but that he would then hold them subject to the same restrictions—in other words what a purchaser would pay to stand in the shoes of the deceased.

To find this figure it is necessary to estimate their value on theoretical lines, e.g., by a comparison of past and prospective dividends with the yield on his money which a purchaser would expect based on the yields obtainable from quoted shares of a similar class with an allowance for the relative unmarketability of the unquoted shares. Of course many private companies do not pay dividends, preferring to exhaust the profits in directors' fees and so there may be no dividend record. In that case regard must be had not to the dividend but to the earnings record of the company. Regard is also had in assessing value to the break-up value of the shares, that is the net amount which the shareholder of those shares would receive in the event of a liquidation; this value may well be greater than that arrived at by looking at the dividend or earnings record of the company—such earnings record may be greatly influenced by personal factors, e.g., the qualifications of the deceased shareholder. Clearly in such valuations the result is at best a reasoned guess and agreeing such valuations is one of the most difficult problems in dealing with a deceased person's estate.

It was found, however, that the value of this type of share in family-type companies was fairly low and in 1940 legislation was brought in to allow valuation of the shares of a controlling shareholder in such a company by reference not to market value but to the net assets of the company. It was this type of valuation, which often results in a high valuation, which was the point discussed in the case in the article to which Mr. Sims refers.

In 1954 it was provided by the annual Finance Act that if shares of a deceased person in this type of company were in fact sold within three years after the death and the sale was made at arm's length for a price freely negotiated at the time of the sale then that sale price must be substituted for the earlier valuation and any adjustment in duty made.

By the 1960 Finance Act it is provided that the valuation of assets of a company for the purposes of finding the value of shares on an assets basis must proceed on the assumption that the business is going to be carried on—in other words what a purchaser would value the assets as if he was going to carry on the business and not realise its assets. The effect of this may reduce some of the excessive valuations under the 1940 Act.

The answers to Mr. Sims' points then are:

- (a) Shares in this family-type company are almost never valued at par but by the complex methods outlined above—it is essential that with shares of any value the personal representatives employ a qualified accountant to argue value with the Estate Duty valuers.
- (b) The personal representatives have to pay the duty on the personal estate before they can deal with the estate at all; interest runs on such duty from the date of death; and in any case the duty must be paid within six months of the death.
- (c) If the deceased's shares have to be sold then the rights of other shareholders on such a sale of shares are almost certainly laid down in the articles of the company; usually they must be offered to the other shareholders at a price to be agreed but in default of agreement at a price to be fixed by the auditor of the company. From what has been said earlier one will realise that this sale price will not necessarily be accepted as the shares' value by the Estate Duty Office even if the sale is within three years of the death and the terms of the 1954 Act apply—it might not be held to be a sale at arm's length. The situation could arise whereby one might have to sell shares to other shareholders at a price fixed by the auditor which is well below their value for estate duty purposes at the time of death.

One point must be made. It is not until an estate reaches some size that estate duty becomes high but in these days of inflated value especially of property it is surprising how quickly a person's estate can mount in value. Probably one of the best methods of meeting the estate duty problem is to have an insurance policy for the probable amount of the duty; policies to meet this kind of situation are issued and advice would be given by most reputable insurance companies.

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adjunct when carrying out maintenance on the interior of the charge machine. A 45-ton crane is installed in the tower for lifting the top off the machine, together with a 25-ton crane in the main hall area.

The walls of this building have been constructed from specially fabricated concrete slabs erected inside the main framework so as to present a completely smooth surface for ease of decontamination if necessary.

The building will also be equipped with a rehearsal shaft and a complete set of control equipment. The concreting of this shaft is complete but the installation of the control equipment will be delayed until nearer the time that the first reactor is made critical.

Between the reactors, in the space used initially for prefabricating concrete floor sections, the cartridge cooling pond has been re-excavated. It will perhaps be recalled that the blasting for the pond was

carried out at an early stage, to avoid later disturbances to the reactors, the broken rock being left for subsequent removal. Most of the concrete lining has been poured and additionally the conveyor tunnels to the block-houses are virtually finished.

The cartridge cooling pond is 186ft. long by 53ft. wide by 18ft. deep, the capacity being such that the complete fuel charge of one reactor can be dumped into it in the case of emergency. The pond is divided into two unequal sections. Under normal conditions the larger section will store the discharged cartridges, and the smaller one cartridges from channels in which a burst has occurred.

Excavation work is proceeding on the foundations of the active-solid-waste building. About half of the associated tunnelling is finished and steady progress is reported on the blinding and asphaltting.

The active-waste disposal plant, on the south side of the two reactors, consists

of the treatment house, delay tanks, and cartridge cooling pond sludge tanks. The delay-tank walls and protective brickwork, and the associated pumphouse are well on the way to completion. The walls and asphalt tanking of the sludge tanks have been finished and the brickwork for them is at an advanced stage. Work on the half-completed treatment house is still continuing. Other buildings in varying stages of erection are the decontamination building, the laundry, and feed treatment and filtration buildings.

Facts and Figures

Area of site—110 acres; reclaimed from sea—17 acres; rock excavated—174,000 cu. yd.; total steel used (estimated)—17,000 tons; total concrete poured (estimated)—185,000 cu. yd.; weight of each reactor (including pressure vessel and contents)—80,000 tons; installed capacity (electrical)—360-MW; new roads on site—4 miles; men working on site (a) peak—2,500, (b) at present—2,300.

MUNICIPAL ENGINEERS VISIT LEICESTER SEWAGE DISPOSAL WORKS

Progress of £2,750,000 Scheme

MEMBERS of the East Midlands District of the Institution of Municipal Engineers recently visited the £2,750,000 sewage disposal works which Leicester City Council are constructing at Wanlip.

All the sewage from the city is now treated on the sewage farm at Beaumont Leys, two miles from the city centre. Two pumping stations pump all the sewage from the town to the farm which covers an area of 1,560 acres. At the Abbey pumping station the pumps lift the sewage through a height of 167ft. and the steam-driven beam engines first used in 1890 can still be seen in operation.

The original settlement tanks and contact beds were also constructed in 1890 to deal with a dry weather flow of 2,750,000 gallons per day. The borough boundaries were extended in the following year; the population was increased from 142,000 to 175,000 and an 8ft. diameter outfall culvert was built from the Abbey pumping station to Wanlip to give relief in time of storm.

In 1930 more settlement tanks were added, 30 filter beds each 100ft. diameter were provided and the pumping capacity was enlarged by the installation of three electrically driven ram pumps. After the war, eight of the filter beds were converted to the re-circulation system but despite this and other alterations the works became seriously overloaded. In 1954 when the population had increased to 280,000 it was quite obvious that a new works was necessary.

Wanlip Works

The site at Wanlip covers an area of 93 acres and it is two miles north of the city boundary. The existing 8ft. diameter brick stormwater culvert with a capacity of 90,000,000 gallons per day will be used to carry the sewage by gravity to the site of the new works.

The new works have been designed to take a D.W.F. of 20,600,000 gallons per day from a population of 329,000 with provision for extensions to take 22,500,000 gallons per day from a population of 360,000.

On arrival at Wanlip the sewage will be elevated about 20ft. in order to gravitate through the works which will consist of detritus tanks, mechanically raked screens, sedimentation tanks, surface aeration units, final settlement tanks and sludge digestion.

Work on the site was commenced in December, 1958, and contract No. 1 was a small one for sinking boreholes to ascertain ground conditions.

Contract No. 2, awarded to John Laing and Son, Ltd., is now nearing completion. It consisted of the construction of the surface aeration units, final settling tanks, return sludge pumping station, final effluent outfall and access roads.

The aeration units comprise 126 "Simplex" high intensity aeration cones and the aeration period will be 1½ hours, machinery being supplied by Ames Crosta Mills and Co., Ltd.

The final sludge separating tanks will comprise 14 circular tanks of 68ft. diameter, sludge being removed by mechanically operated scrapers supplied by W. E. Farrer and Co., Ltd.

Return sludge pumps of the axial flow type will be installed with a maximum pumping capacity of 100 per cent. D.W.F.

Contract No. 3, commenced in June by Tarslag, Ltd., consists of the sedimentation and stormwater tanks with associated channels, etc. The sedimentation tanks will comprise eight rectangular units 187ft. 6in. by 59ft. and the eight stormwater tanks of the same size will be used for flows exceeding 2.34 by D.W.F. before discharge into the River Soar.

A contract has recently been let to Harland and Wolff, Ltd., for the supply of five dual/fuel engines. Allen self-

regulating alternators are to be used resulting in saving in cost and space for starting equipment.

All the sludge will be digested in four primary and four secondary tanks and it is hoped that the gas produced from digestion will be sufficient to run all the machinery on the works.

The disposal of the digested sludge by means of composting it with household refuse has been under consideration for some time, and although no decision has been finally taken, the latest figures indicate that this is likely to be the most economic method of disposal. It will also increase the fertility of the land as well as ensuring complete disposal of the sludge and house refuse.

The works have been designed by J. D. and D. M. Watson, consulting engineers, in conjunction with Mr. John L. Beckett, M.I.C.E., M.Inst.Mech.E., M.I.Mun.E., M.T.P.I., the city engineer and surveyor.

President Entertained

A correspondent writes: Prior to the meeting, the East Midlands District executive committee entertained the president of the Institution, Mr. Arthur S. Hamilton, who was accompanied by Mr. H. V. Overfield, the Institution's secretary.

Members later assembled at the resident engineer's office on the site, and in conjunction with the consulting engineers, the city surveyor's department provided a display of working drawings of the scheme.

Mr. Beckett then welcomed members, and after a brief outline of the scheme introduced Mr. Dwyer and Mr. Griffin of the consultants who gave a resumé of the work involved by reference to the plans.

Through the able arrangements of Mr. R. E. Preece, the resident engineer, members were afterwards allocated into eight parties, with guides attached to each, and conducted over the work in progress for a detailed inspection.

At the conclusion of the inspection the visitors adjourned for a general discussion to the canteen of the contractors, John Laing and Son, Ltd., where following a buffet tea the district chairman, Mr. M. L. Francis, borough engineer and surveyor, Derby, introduced the president and concluded the meeting with appropriate votes of thanks to Mr. Beckett and his staff, the consulting engineers and the contractors.

SHARING OF COAST PROTECTION COSTS

Burden Should be Distributed, Says Minister

DECISIONS on coastal defence plans would inevitably be taken out of the hands of local people if the whole financial burden were shouldered by the Government, said Mr. Henry Brooke, Minister of Housing and Local Government, last week.

Mr. Brooke, who was speaking at a ceremony marking the completion of Clacton Urban District Council's coast protection works (see page 77), went on, "I think that the people who live in the area ought to have an effective say in the planning of the sea defences which affect them so vitally."

"I am quite certain that holiday resorts which so often take the opportunity to embody promenade schemes and planting schemes and other attractions for visitors in the construction of the sea defences, as you in Clacton have done, would not care much for the purely utilitarian form that coast defences would take if the Government shouldered the whole financial responsibility, and planned the works purely and simply to keep the sea out."

Earlier, Mr. Brooke remarked that it was sometimes suggested in Parliament that coast protection should become entirely a national responsibility. However, a Royal Commission in 1911, and a committee under the chairmanship of Lord Waverley after the 1953 floods, both decided in favour of the view that coast

protection was a matter in which individual and local and national interests were all concerned, and therefore that the burden of the coast should be distributed between them. "I am sure this is right," said Mr. Brooke.

It was just over 10 years since the Coast Protection Act came into operation. In that time some 300 coast protection schemes in England and Wales had been put through, at a total cost of £15m. Exchequer grants towards that cost so far totalled about £7m.

TALL BUILDINGS

Discussions at Brixton School

Four discussions on tall buildings are to be held this session at Brixton School of Building, Ferndale Road, S.W.4: October 26—Planning in Relation to Tall Buildings (Internal Planning Problems and Town Planning Considerations); November 23—Internal Services in Tall Buildings; February 1—Contractors' Problems in Tall Buildings; March 8—Open Forum with previous lecturers in attendance to answer questions.

The discussions will begin at 6.45 p.m. and each will be opened by one or more speakers specially experienced in the aspects of the subject under consideration. There will be no charge for admission.

SOUTH WALES CONTRACTORS' GOLFING MEETING

The South Wales and Monmouthshire Civil Engineering Contractors' Golfing Society held an open meeting at the Royal Porthcawl Club recently.

Mr. Clifford Turner, captain of the Society, welcomed visitors, who included representatives from the Ministry of Works, the Ministry of Transport, the Cardiff Association of Building Trades Employers and Associates' Golfing Society, and the Chartered Architects and Surveyors' Golfing Society.

Mr. John Morgan, the president, presented prizes to the following: Morning Competition (foursomes against bogey)—I, D. Blair and R. Pugsley, four up; runners-up—B. J. Dando and B. Phelps. Afternoon Competition (foursomes Stableford)—I, W. Bruce and J. Kilpatrick, 30 points; runners-up—J. Bowen and R. Martin.

CIVILS' LIBRARY OF COMPUTER PROGRAMMES

The Institution of Civil Engineers have adopted the suggestion of a Toronto graduate, Mr. Norbert Morgenstern, B.A.Sc. (Toronto), a research assistant in the Department of Civil Engineering at Imperial College, to form a library of computer programmes.

He (among others) made the suggestion last February at the Institution when the Paper, "The Place of Digital Computers in Civil Engineering," was being discussed.

Men and Movements

MR. RICHARD MILES, who retired recently as chairman of Head-Wrightson and Co., Ltd., has been appointed a director and chairman of Joy-Sullivan, Ltd.

Two new promotions have been made by Bristol Plant Hire, Ltd. **Mr. R. B. Jones** has been appointed local director for South Wales area, and **Mr. G. W. Hawkins** local director for the Midlands area.

B.T.R. Industries, Ltd., have announced the following new senior staff appointments: **Mr. J. A. Hardman** becomes general manager, belting division; **Mr. D. J. Hodgson**, controller of research and **Mr. L. W. Rodway** to be manager of market research and development.

Mr. G. E. Dix, who joined Massey-Ferguson at the end of 1959, has been appointed general purchasing manager, U.K. Operations. In his new post, Mr. Dix will be responsible for developing and co-ordinating overall purchasing policies for the separate purchasing activities in the U.K. Operations. He will be succeeded as purchasing manager of Massey-Ferguson's Banner Lane plant by **Mr. D. W. Stevens**. **Mr. W. J. Renton** has joined the company as general shipping and traffic manager. He was formerly manager of export order and shipping department with Kelvinator, Ltd.

The managing director of the Cementation group of companies, **Mr. C. F. Grundy**, left for India at the beginning of this week on a 10-day business tour. He will visit Durgapur in West Bengal and Bombay.

Mr. J. G. Dawson, B.Sc., M.I.Mech.E., has succeeded **Mr. V. H. Hopkins** as chairman of council of the British Internal Combustion Engine Research Association. **Mr. S. J. Wood** has been elected vice-chairman.

Mr. John Raymond, chairman and managing director of Stone-Chance, Ltd., a member firm of Stone-Platt Industries, left London recently for New York and Washington to attend the International Conference on lighthouses at Washington. He is also visiting his company's subsidiary, Sumo Pumps, Inc., of which he is president, and some of the larger American manufacturers of telecommunications equipment. Mr. Raymond returns on October 8.

Two new sales representatives, to cover Northern Ireland and the south-west of England, have been appointed by Copperad, Ltd. **Mr. M. A. Truran** will cover a new area comprising the counties of Cornwall, Devon and Dorset. He joined the building industry in 1948, and went to Copperad after having been branch manager for C. Bryant and Sons, Ltd., Torquay. **Mr. R. B. Wilyman**, who will be known as the western representative, will be responsible for Gloucestershire, Somerset and Wiltshire. The new representative in Northern Ireland will be **Mr. K. Morrow**. Other changes are that **Mr. D. R. Allen** is to share the Yorkshire territory with **Mr. H. W. Hobson**, his place in the London office being taken by **Mr. A. B. Swayne**, from the Colnbrook technical department.

Mr. Stanley C. Greatrix has been installed as national president of the Building Surveyors' Institute at the recent annual general meeting. He was national president of the Institute in 1957/58.



T. SHAKESHAFT

Among passengers embarking on the "Queen Elizabeth" for New York last week was **Mr. Frank M. Morris**, chairman and managing director of Herbert Morris, Ltd., Loughborough.

Mr. W. M. H. Stevens, A.M.I.Mech.E., M.S.A.E., has been appointed deputy chairman and joint managing director of Firth Cleveland Pumps, Ltd. Mr. Stevens was formerly the technical director of Bowser International, Ltd. **Mr. R. W. Hill** continues as joint managing director and will control sales activities from the Firth Cleveland group headquarters in London.

Three members of J. C. Bamford (Excavators), Ltd., recently spent a week in Chicago attending the National Machine Tool Exhibition. They are (left to right): **Mr. Peter Mayer**, production manager; **Mr. Reginald Clayton**, machine tool setter operator; and **Mr. Hubert Elkin**, machine



shop foreman. Mr. Clayton was selected after winning a competition in which members of the machine shop were asked to submit an essay on the subject: "Why I am the most suitable member of the machine shop to attend the Machine Tool Exhibition in Chicago, U.S.A."

Mr. G. F. D. Spong, overseas technical representative, Expandite, Ltd., will be leaving London on October 4 for a tour of all Middle East countries. He will be visiting the company's associates and distributors, and will also be studying the application of certain specialised materials under tropical conditions.

The new general works manager of Midland Tar Distillers, Ltd., is **Mr. W. F. Dines**, who recently joined the board. He succeeds **Mr. W. E. Aylwin**, who is retiring from the position, but who will remain on the board.

Following the recent death of **Miss E. L. Drinkwater, W. W. Drinkwater (Willesden), Ltd.**, have announced the appointment to the board of **Mr. Maurice C. Drinkwater**. He joined the company 12 years ago, and in 1954 was appointed London manager.

The appointment of **Mr. R. J. Abrahams** as the sales director of The Yale and Towne Manufacturing Company's British lock and hardware division, at Willenhall, has been announced. Mr. Abrahams has been the division's general sales manager since he joined Yale and Towne in May last year. **Mr. E. A. Venner** remains home sales manager, and **Mr. H. Marshall**, export sales manager.

Two directors of Stewarts and Lloyds have joined the board of their recent acquisition, The Staveley Iron and Chemical Co., Ltd. They are **Mr. L. M. T. Castle**, managing director, finance and general administration, and **Mr. N. C. Macdiarmid**, who is also managing director of the Stanton Ironworks Co., Ltd.

Mr. Neil Wates has been appointed to the board of Wates, Ltd. He has been with the company since 1954, and is a director of the subsidiary, Wates Built Homes, Ltd.

MUNICIPAL

Bexhill B.C. have been recommended to appoint **Mr. Arthur Burrell** as deputy borough surveyor. Mr. Burrell is at present chief engineering assistant to Hayes and Harlington (Middx.) U.D.C.

Mr. F. W. Blackmore, divisional surveyor with Northamptonshire C.C., has retired after 41 years in local government service.



Representatives from the North and West Riding County Councils, and the building and civil engineering trades in Yorkshire, were the guests of Holdsworth (Yorkshire), Ltd., Whitlock distributors, when they recently travelled by air from Leeds to Great Yeldham to inspect the new range of Whitlock earthmoving equipment. The party is seen at Yeadon Airport, Leeds, prior to take-off

INDUSTRYS' EFFORT TO REDUCE AIR POLLUTION

THE annual conference and exhibition of the National Society for Clean Air opened yesterday in Harrogate with an address by the Parliamentary Secretary to the Ministry of Housing and Local Government, Sir Keith Joseph, M.P. Before his address the conference—comprising 1,000 delegates from local authorities, national associations, firms, medical men and technologists—was given a civic welcome by the Mayor of Harrogate, Councillor L. Roberts, J.P.

Sir Hugh Beaver, who was Chairman of the Government's Committee on Air Pollution set up after the great London smog of 1952, then gave his presidential address. Progress, said Sir Hugh, had not been as rapid as they had hoped, but it was being made. He praised industry for the efforts it was making, often at considerable expense, to reduce air pollution. Thus all the new power stations were virtually smokeless, with very high performance grit arrestment plants and high chimneys—up to 600ft. The iron and steel industry had embarked on a very costly campaign to deal with emissions from ore driers, sinter plants, blast furnaces and the new techniques of steel production. The coking industry had a working party with the Alkali Inspectorate to investigate the problem of gas from the charging of coke ovens. The bottle oven kiln of the Potteries was rapidly giving way to smokeless techniques.

"During the past few years," said Sir Hugh, "industry has done much and had already spent or allocated several millions of pounds to clean air measures."

Domestic Problem

On the domestic smoke problem Sir Hugh said:

"There may well in due course be developed domestic heating appliances which can safely use many of our raw coals without nuisance and without skilled, or at least without skilful, and continuous attention. But these have not yet been developed. So if we believe in clean air, if we believe that too long have we subjected ourselves and our children and our aged to the unquestioned and lethal dangers of foul air, we must accept that there must in due course be some control over all domestic firing appliances wherever people are thickly congregated; or over the fuel used—or both.

"In industry it is as we know perfectly possible to use in nearly all boilers and furnaces the poorest of coals so as reasonably to fall within the Act. This is not so and probably never can be the case with the domestic hearth."

LESS WORK FOR PRIVATE ARCHITECTS

An R.I.B.A. inquiry shows that the value of new work commissioned of private architects in the second quarter of 1960 fell by one quarter from the level in the first three months of the year, but it was still one fifth more than a year earlier.

The greatest proportionate fall was in private housing and in new work coming to the small firms with a staff of five or fewer.

"MUNICIPAL ENGINEERING SERVICES"

At the first general meeting of the current session of the Institution of Plant Engineers, Mr. A. F. Holt, Croydon borough engineer and surveyor, will present a Paper entitled "Municipal Engineering Services."

The meeting will be held on November 1 at the Royal Society of Arts, John Adam Street, London, W.C.2, at 7 p.m.

ABERFORD BY-PASS CONTRACT AUTHORISED

AS reported briefly last week, Mr. Ernest Marples, Minister of Transport, has now authorised the letting of a contract to Dowsett Engineering Construction Co., Ltd., for the building of Aberford By-pass in the West Riding of Yorkshire, at a cost of £690,707.

The by-pass forms part of the Ministry's plan for modernising the Great North Road between London and Newcastle upon Tyne. It will run to the east of Aberford for just over 2½ miles, and will have dual 24ft. wide carriageways, a 15ft. central reservation (widening to 30ft. at junctions) and two 12ft. grass verges. Eventually the new road will link the nearly completed Micklefield By-pass with the trunk road between Aberford and Wetherby, which is scheduled for improvement.

Included in the contract is a flyover junction at Hook Moor crossroads, connecting with the Wakefield Road (A.642) and the Castleford Road (A.656), and a bridge to carry the by-pass over Lotherton Lane.

The scheme has been prepared on behalf of the Minister by the West Riding of Yorkshire County Council (county surveyor, Col. S. Maynard Lovell, O.B.E., T.D., A.M.I.C.E., A.M.I.Mun.E., M.Inst.H.E.), and the work is expected to be finished by August, 1962.

DROUGHT THREATENED FACTORIES' CLOSE-DOWN

Measures taken to cope with the 1959 drought in the Billingham group of I.C.I. chemical factories on North Tees-side were described at the Institution of Civil Engineers this week in a Paper, "The Utilisation and Conservation of Water in the Chemical Industry," by Mr. J. A. Cooper (design chemist) and Mr. L. G. Smith (design engineer for water and drainage).

"Before the drought," the authors stated, "normal daily consumption was about 7,000,000 gallons of town water, about half that amount of medium-quality water from local streams and boreholes, and 230,000,000 gallons of estuarine water. By late August, industrial plants on Tees-side were warned that their water consumption might be reduced to 10 per cent. of normal for several weeks with a further threat of being shut down if the rains did not come in time. As it happened, the drought ended before a total disruption of industry took place."

The authors said that the I.C.I. made a drastic reduction of about 60 per cent. in consumption of high-grade town water during the drought, partly by economising and partly by increasing the use of medium-grade water, both at considerable expense. The overall saving in clean-water consumption was about 32 per cent.

Methods adopted to augment supplies included pumping from a large local pond and colliery, sinking 12in. boreholes to 500ft. in a fortnight, and pumping water across country in plastic pipelines obtained from the Civil Defence organisation.

FLATS FROM FACTORIES

A new feature of building construction in Holland is the complete factory production of whole flats ready for rapid assembly on site. In "Building Matters" on October 11, (B.B.C. Network Three), the building team (C. Crichton and K. Pearce, builders, and H. Kaylor, consulting engineer) will discuss this development with G. Goulden, deputy director of the Building Centre, who has recently returned from Rotterdam.

Another guest of the team will be P. Trench, director of the N.F.B.T.E., who will present a report on housing in the U.S.A.

INSURANCE ARRANGEMENTS FOR COUNCIL EMPLOYEES

MR. HENRY BROOKE, Minister of Housing and Local Government, after consultation with the associations of local authorities and the staff associations principally concerned, has announced levels of pay above which it is proposed that superannuable local government employees should be contracted out of the Government's new graduated national insurance scheme. It is proposed that employees whose pay is at or below these levels will participate in the scheme.

In order to secure uniform arrangements throughout the country, the Minister has made regulations empowering him to act in the place of the employers and apply for certificates of non-participation in respect of employees subject to the Local Government Superannuation Acts, 1937 to 1953, or to local Act superannuation schemes, who are to be contracted out.

The regulations, the National Insurance (Non-participation—Local Government Staffs) Regulations, 1960, came into operation on October 1.

A circular letter to local authorities says: "In the course of the consultations it was agreed that superannuable employees whose pay exceeded a specified level should be contracted out of the graduated scheme and that the remainder should participate. It was also accepted that it would be reasonable to specify a lower level of pay for this purpose for women employees than that specified for men.

"After carefully considering the relevant factors and the views put forward by representative bodies of employers and employees, the Minister came to the conclusion that he should accept the recommendation of the associations of local authorities who employ the great majority of the staff covered by the local government superannuation scheme, that the level of pay which should determine whether or not a superannuable employee participates in the graduated scheme should be taken at £13 a week for men and £12 for women. He also accepts that it would be desirable to have arrangements for securing that employees should not frequently change from participation to non-participation on changes in pay, and provision to this end is included in the detailed proposals set out in the form of notice to employees. . . . An application for the necessary certificate of non-participation will in due course be made to the Registrar of Non-participating Employments."

WHEN HIGH BUILDING DENSITIES ARE ACCEPTABLE

At particular points where development or redevelopment was due, densities materially above the average could be accepted without prejudice to the general development plan for a whole borough or county, said the Minister of Housing and Local Government, Mr. Henry Brooke, at Southgate recently.

The Minister, who was opening the Borough Council's 13-storey flats (*The Contract Journal*, September 29), said: "We need to be open-minded about densities, particularly on smallish sites ripe for development, though we must also be specially careful to make sure that any higher density scheme is a really good one from the planning standpoint."

ENGINEERING WORKERS' WAGE CLAIM

The Confederation of Shipbuilding and Engineering Unions have submitted a wage claim for another £1 per week. The employers are expected to give their reply in the middle of November.

Talking of Safety

by

"DRAGEE"

I HAD a quick tour round the Factory Lane site then went back to Bill Kennedy's office to await his return from the meeting. Pete brought me a mug of tea—a large shiny mug, distinctly off-white, and bearing a tell-tale smear of red across the rim.

"Been entertaining?" I asked casually, looking out of the window. A broad, homely female back was just moving past the time office, out on to the main road. Pete's eyes followed my gaze, then he looked at the tea mug.

"Ah—proper Sherlock 'Olmes you are, guv," he grinned. "That's me old woman; comes here every pay-day, three o'clock sharp. Collars the packet—the lot. I get what's left, see? Cor sufferin'!"

"She treats you so badly you offer her a cup of tea every time she comes?"

"That's the idea. But she don't care for our tea that much."

"Then why does she drink the stuff? Nobody else would if there was anything better to be had."

Pete stiffened. "I know that," he said, a trifle coldly. "But the first time she came—six months ago it was—I give her a cup because the weather was cold, and after she'd finished she said 'that's the best cup o' cocoa I've had for a long time.' And I've never had the heart to tell her different!"

I stared at him hard, but he didn't bat an eye, then I gave him a cigarette and lit one myself.

"Look," I said, "now that the long day's work is nearly ended, we had better go and inspect the messroom—particularly the washing-up department."

Pete led the way across a rough piece of ground, thick with weeds and strewn with debris, to a long low hut against the boundary wall. As Pete felt for his key he said:

"We've just moved this hut over here. A few months after it was first put up they made a temporary road across the site—right through me broom cupboard and sink—and now we're in the flippin' jungle."

"How do the men get to the door?" I asked in surprise. "Isn't there a path?"

Pete gave a hollow laugh. "We cleared a bit of ground when we moved here, but the weeds come up quicker than you can knock 'em down."

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

I moved a piece of concrete with my foot. "I'll have a word with Mr. Kennedy," I said. "These bricks and things must be cleared away before someone breaks an ankle, and we'll have to have a proper path made. That's a legal obligation. When people are working on our premises we've got to see that they can move about safely. Now let's have a look inside."

Pete unlocked the door and we walked into the canteen. As I had expected, the place was reasonably clean and tidy. Chairs were neatly stacked on the scrubbed tables and obviously the floor had just been swept.

"We're getting a bit tight for space," said Pete, "but we've another hut coming next week. I'll need a lad, then," he added, "so you'd better tell Mr. Kennedy and save me a rumpus."

"How many men do you have in here?" I asked.

"Sixty-three at present, including myself."

I took a 6ft. tape out of my pocket and made a few measurements. "At the official rate of 1ft. 8in. per person, that means standing room only for some, unless they're packed tight," I said.

"Well, some of them sit out of doors when it's fine," said Pete, "but it's a bit of a crush when they're all inside."

"I like the plastic table tops," I said approvingly; "and I'm glad to see you've got some decent seats. These are an improvement on the usual humane killers."

Pete snorted. "In my day we sat on a plank or a heap of bricks, not on flippin' front parlour chairs."

We walked into Pete's pantry. There was an ancient but workable gas cooker in one corner, and a large sink near the window. An assortment of cans, mugs, cups and even saucers were piled on a shelf. There was no running hot water for cleaning purposes, and Pete had to manage with a bucket on the gas ring. A few towels hung on a line. Clearly they hadn't had the full treatment prescribed by the washday wizards of Commercial T.V., but they would pass in the twilight. "Thanks a lot, Pete," I said as I went out.

"Sorry about the cup, guv," said Pete. "Must've got through the wash somehow. It's that ruddy kissproof stuff, that's what it is . . . Cor," he added with a chuckle, "the old girl must be going gay!"

I was getting ready to leave the site when Bill Kennedy came back from his meeting.

"Sorry I've been so long," he said. "Don't apologise. I've just had an

interesting discussion with Pete in his glory hole. I've jotted down a few items which seem to need attention. The paper's on your desk."

Kennedy sighed.

"I know I should be grateful," he said, "but I do sometimes think you abuse my hospitality."

MORE FACTS ABOUT BRITAIN'S ROADS

Britain's roads continue to be the most crowded in the world. This is one of the hundreds of facts in the 1960 edition of "Basic Road Statistics," published last week by the British Road Federation.

On the most recent count, we have 30.9 vehicles per mile of road, 3.3 more than West Germany, and 10.6 more than the United States. These figures cover four—or more—wheeled vehicles only. Add motor cycles and others and the British figure jumps to 44.8—that is one for every 40yd. of road, street and country lane.

How does revenue from motor taxation compare with the amount of money spent on the roads? At £589m. in 1959/60—11.1 per cent. of national revenue—motor taxation receipts are well over four times what they were 10 years ago. And more than treble current road expenditure for all purposes.

Latest confirmed figures of Government expenditure on the road programme are those for 1958/59. £47,100,000 was actually spent although the Civil Estimate vote by Parliament that year was for £52,900,000. It is estimated that by March 1961 the value of work in progress on road modernisation schemes started but not completed will be £169,779,000.

Among other points are these three: (a) New vehicle registrations soared in 1959 to the highest-ever total of 1,250,000—two a minute throughout the year; (b) total cost of road accidents to the community rose by £29m. to £219m. in 1959; (c) Britain's roads are the responsibility, one way or another, of no less than 1,285 separate highway authorities.

"Basic Road Statistics" is available from the Federation at 26 Manchester Square, London, W.1. Price 1s. plus 5d. postage.

INSTITUTE OF BUILDERS Establishment of Branches

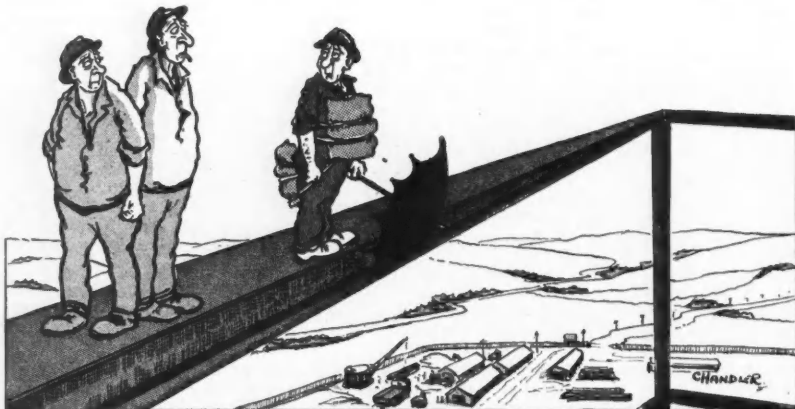
The inaugural meeting of the first branch of the Institute of Builders, the Midlands Branch, will be held at the Grand Hotel, Birmingham, on Friday, October 7, at 6.30 p.m. The President of the Institute, Mr. G. O. Swayne, O.B.E., F.I.O.B., will be in the Chair.

Membership of the branch will be available to all classes of member resident in the area of the five counties, Hereford, Shropshire, Stafford, Warwick, and Worcester.

This meeting will mark the initial step in the implementation of a "master plan" adopted by the Council of the Institute for the ultimate establishment of 23 branches (18 in England, one in Wales, two in Scotland, one in Northern Ireland and one in the Irish Republic).

FOUNDATION ENGINEERING COURSE

An evening course of eight weekly lectures on "Foundation Engineering" is to be held at the new Civil Engineering Building, University of Leeds, on Mondays from October 24. The lecturer is Mr. R. D. Mackey, B.Sc., A.M.I.C.E., and the course will be under the supervision of Prof. R. H. Evans, C.B.E. Applications to attend the course, for which the fee is £3 10s., should be made to the Department of Adult Education and Extra-Mural Studies, The University, Leeds, 2.



"One never knows!"

International Construction

11-STOREY TORONTO OFFICES BUILT IN TWO SECTIONS

World's Largest Span Claim

A NEW landmark in Toronto was recently completed by Anglin Norcross, Canadian associates of Holland & Hannen and Cubitts, Ltd. It is the 11-storey black and silver office building for Union Carbide Canada, Ltd., built at a cost of £1,800,000.

The building is believed to have the largest span of any office building in the world, with all interior columns eliminated to allow interior dimensions of 210ft. by 61ft.

Exterior projecting columns are faced with black granite and the building incorporates the largest amount of stainless steel curtain wall construction in Canada. An estimated 78 tons of steel curtain wall has been used, covering an area of over 60,000 sq. ft.

The building was constructed in two sections—the main structure, and the elevator tower to the rear. It occupies an entire block, with a car park for 235 cars. Some 450 Union Carbide employees work in the new building on the upper seven floors.

Movable metal partitions are used throughout the interior except on the executive floor which has a permanent type masonry wall finished in plaster and wood panelling. The ceiling of the executive offices will be completely luminous.

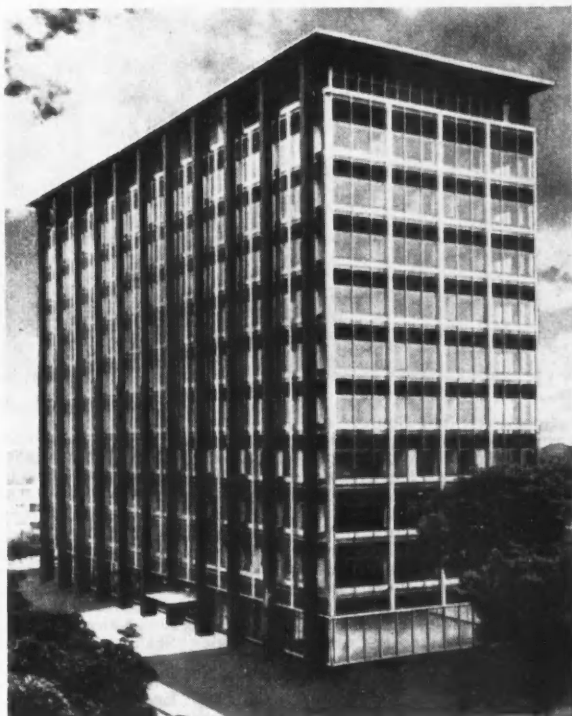
The main foyer has walls of granite and glass mosaic, terrazzo floors and indirect lighting.

Air conditioning equipment has been installed for all parts of the building. On each floor conditioned air enters from two sources; in

perimeter offices from window induction units a foot above floor level, and in interior offices through the perforated ceilings.

There are four main lifts and a service lift. A staff cafeteria can cater for 185 people at a sitting.

The architects were Shore and Moffat, Toronto, and the consulting mechanical engineers were Charles S. Leopold Engineers Inc., Philadelphia, U.S.A. Main contractors were Anglin-Norcross (Ontario), Ltd., Toronto (superstructure), and Perini, Ltd., Toronto (substructure). Curtain wall fabricators were Macotta Co. of Canada, Ltd., Toronto.



The completed building

NIGERIA'S NEW £4M. CEMENT WORKS

WITH the conferment of independence on Nigeria comes news of that country's biggest industrial project yet, the £4m. cement works now being erected by The West African Portland Cement Co., Ltd., at Ewekoro, 40 miles north of Lagos.

Production is expected to commence towards the end of October and will be at the rate of 200,000 tons a year. The most modern cement manufacturing equipment available is being installed at the factory which is so planned as to permit of expansion when considered desirable.

The three partners in the scheme are The Associated Portland Cement Manufacturers, Ltd., Western Nigeria Development Corporation, and The United Africa Co., Ltd., an association of local and overseas capital.

The main features of the works will be:

the 500-h.p. hammer crusher, with a crushing capacity of 200 tons of limestone an hour; the kiln, 200ft. long, 12ft. 6in. in diameter, weighing 600 tons, which will be oil-fired; the 150ft. high chimney; two 1,100-h.p. cement grinding mills; two silos, 90ft. high and 35ft. in diameter, with a storage capacity of 2,500 tons of cement each.

£3M. AUCKLAND HOTEL PLAN

An inner-city site for a £3m. tourist hotel in Auckland, New Zealand, has been purchased by the Chevron-Hilton organisation for £300,000. It is planned to build a 23-storey building providing 600 to 700 bedrooms. The organisation is negotiating to buy another property, also in the inner-city area, to develop for the tourist trade.

CONSTRUCTION'S "EXPORT DRIVE"

To the Editor of "The Contract Journal."

Sir,—In view of the suggestion contained in your Editorial of September 22, that the Export Group would be doing a useful job if it examined the possibilities, perhaps in conjunction with the Export Credits Guarantee Department, of encouraging and helping more contracting firms to build overseas, I think I should let you know what the Group has been doing.

Following the meeting addressed by the Prime Minister on July 18, when he appealed for increased exports, I wrote on August 3 to some 150 of the medium-sized and larger building and civil engineering companies who do not at present work overseas, in an effort to interest them in overseas constructional works and assured them that the Group would be willing to do what it could to help them.

To meet the point that the Group should co-operate with the Export Credits Guarantee Department, I am pleased to report that the Group has worked closely with the Department over a number of years and has negotiated with them a special Constructional Works Guarantee to meet the particular needs of our industry. Since that Guarantee was agreed, the value of contracts for which Guarantees have been issued has amounted to £26m., while applications in the pipeline amount to £96m.

While the Group has the most friendly relations with the Department and Her Majesty's Government, it is no secret that, despite the balance of payments difficulties, we consider that more could and should be done to assist our industry by the provision of development loans for overseas works and we are continuing to press this point of view.

The benefits of what we have achieved and anything we may achieve in the future are and will be available to those who have not done overseas constructional work hitherto and to non-members as well as members of the Group.

May I say that I welcome and entirely agree with your comment, as we think our industry, as the spearhead of other British trading interests, has a vital part to play in securing export contracts for capital goods and services which, apart from the contribution they make to the United Kingdom's economy, are also of considerable prestige value.

Yours, etc.,

E. C. BECK,

Chairman of Council.

The Export Group for the
Constructional Industries.

£150,000 SCOTTISH ROAD IMPROVEMENT

For the re-construction of almost three miles of the Tarbert-Rodel road (A.859), immediately south of Tarbert, the Secretary of State for Scotland has approved a grant of 100 per cent. This scheme, which is estimated to cost about £150,000, forms part of the Crofters Counties programme and will continue the rebuilding of A.859 on Harris under that programme.

Under the scheme now approved an 11ft. carriageway will be provided with passing places 18ft. wide and spaced about 12 per mile. At sharp bends and on steep gradients the carriageway will be widened to 18ft. The road will be reconstructed generally on its existing line but at four points short diversions will be built to give a better alignment. A new bridge will be built over the River Horsaclett.

The work will be carried out by William Tawse, Ltd., Inverness, as contractors to the County Council, who have prepared the scheme and will supervise its execution.

FOR THE DIARY

- Oct. 6**
Convention on Parking arranged by the Institution of Municipal Engineers at Central Hall, London, 10 a.m.
Meeting of the London Branch of the Contractors' Mechanical Plant Engineers at Red House Hotel, Redbridge, 7.30 p.m. Open Forum.
- Oct. 7**
Meeting of the Institution of Highway Engineers at 11 Upper Belgrave Street, London, S.W.1. "Lessons Learned on the Design, Construction and Maintenance of Motorways—from the County Surveyor's Angle," by H. Bowdler, Kent county surveyor.
- Oct. 11**
Building Trades Exhibition, City Hall, Deansgate, Manchester, Oct. 11-22.
Annual dinner of the Contractors' Plant Association, Dorchester Hotel, London, 7.30 p.m.
Meeting of the Birmingham branch of the Institution of Plant Engineers, Hotel Leofric, Coventry, at 7.30 p.m. Talk on "Modern Air Compressors and Equipment."
The Institution of Civil Engineers, Great George Street, Westminster, S.W.1. 5.30 p.m. "The Fire Resistance of Prestressed Concrete Beams," by L. A. Ashton and S. C. C. Bate.
- Oct. 12**
South Western Branch of the Institution of Highway Engineers. Meeting at Fort's of Milsom Street, Bath, 12.15 p.m., at the invitation of the Bituminous Roads Development Group.
- Oct. 13**
Twenty-first national conference of the Council for the Preservation of Rural England, Pavilion, Weymouth, Oct. 13-15.
The Institution of Civil Engineers, Great George Street, Westminster, S.W.1. Traffic Engineering Study Group's informal discussion—"Economics and Efficient Traffic Surveys"—introduced by F. Garwood.
- Oct. 14**
Annual dinner and dance of the Institute of Quantity Surveyors at the Trocadero Restaurant, London, W.1.
Joint meeting of the Southern District of the Institution of Municipal Engineers with the Institution of Civil Engineers (South Western) at the Military College of Science, Shrivenham, Berks.
- Oct. 18**
National conference of the Town and Country Planning Association, Church House, Great Smith Street, London, S.W.1. "Planning and the Motor Vehicle," Oct. 18-19.
The Institution of Civil Engineers, Great George Street, Westminster, S.W.1. 5.30 p.m. "Zambesi Hydro-electric Development at Kariba: First Stage," by Sir Duncan Anderson, T. A. L. Paton and C. L. Blackburn.
- Oct. 19**
Annual general meeting of the Institute of Quantity Surveyors at 6.30 p.m.
Meeting of the Reinforced Concrete Association at 11 Upper Belgrave Street, London, S.W.1, at 6 p.m. "Lift Slab Design and Construction," by F. R. Benson, B.Sc.(Eng.), A.M.I.C.E.
- Oct. 20**
Meeting of the Yorkshire branch of the Contractors' Mechanical Plant Engineers, Station Hotel, York, 7.30 p.m. Lecture on "Plant Maintenance."
- Oct. 21**
Annual dinner of the Society of Engineers at the House of Commons.
Meeting of the Midland branch of the Contractors' Mechanical Plant Engineers, the Wilson Arms, Knowle, 7.30 p.m. B. D. Richardson, Lecturer in the Department of Civil Engineering, University of Birmingham, on "Traffic Engineering."
- Oct. 25**
The Institution of Civil Engineers, Great George Street, Westminster, S.W.1. 5.30 p.m. "The Application of Work Study to Local Authority Problems," by M. E. Habershon.
- Oct. 27**
The Institution of Civil Engineers, Great George Street, Westminster, S.W.1. Traffic Engineering Study Group's informal discussion—"Dartford Tunnel Origin and Destination Survey"—introduced by F. A. Rayfield.
- Oct. 27**
Meeting of the Metropolitan and Southern branch of the Institute of Sewage Purification, Friends House, Euston Road, London, N.W.1. 6.30 p.m. Paper "The Biological Treatment of Chemical Wastes," by I. S. Wilson and Miss E. Harrison.
- Oct. 28**
Annual dinner and dance of the Mid-Southern branch of the Contractors' Mechanical Plant Engineers, Red Lion Hotel, Henley-on-Thames, 7.30 p.m.
Autumn meeting of the Scottish Branch of the Institution of Municipal Engineers at Kirkcaldy, Oct. 28-29.
- Nov. 1**
Annual dinner of the British Road Tar Association, Grosvenor House, London, W.1. 7.30 p.m.
The Institution of Civil Engineers, Great George Street, Westminster, S.W.1. 5.30 p.m. Presidential address by Sir Herbert Manzoni.
- Nov. 2**
Annual dinner and dance of the Federation of Registered House-Builders at the May Fair Hotel, London, W.1.
- Nov. 3**
House-Builders' Conference, organised by the Federation of Registered House-Builders, at the Connaught Rooms, London, W.C.2.
- Nov. 14**
Public Works and Municipal Services Congress and Exhibition, Olympia, London, Nov. 14-19.

BOOK REVIEWS

Reinforced Concrete Piling and Piled Structures, by F. E. Wentworth-Sheilds, W. S. Gray and H. W. Evans. Published by Concrete Publications, Ltd., London. 149 pages. Price 18s., by post 19s.; in Canada and U.S.A. \$4.

The second edition of this book contains in a concise form much information for designers, constructional engineers, and students concerned with the manufacture, driving, and design of precast concrete piles, the testing of soils, and the design of piled structures. There are 116 illustrations and 17 tables. The design data is in accordance with the latest British codes of practice.

Extensive revisions have been made to the previous edition. Subjects which are additional, or have been amplified, include loading tests, the calculation of bearing capacities of piles, the design of sheet-pile retaining walls, and specification and quantities. The stresses occurring during driving are dealt with in detail. Methods of designing pile-caps for single piles and groups of piles are given with numerical examples. The descriptions, working drawings, and illustrations of works in the course of construction justify the addition to the title of "Piled Structures."

Radioactive Wastes—Their Treatment and Disposal. General Editor: John C. Collins, B.Sc., M.S.E., A.M.I.C.E. Publishers: E. and F. N. Spon, Ltd., 22 Henrietta Street, London, W.C.2. Price 55s. 239pp.

With the increasing amount of radioactive waste from the growing number of nuclear power stations and the greater employment of radioisotopes in industry, this book constitutes an important contribution to the field of wastes engineering.

The scope of the volume may be adequately described by its chapter headings, which are as follow: The Nature of

Radioactivity; The Sources of Radioactive Wastes; The Hazards of Radiation; The Measurement of Radioactivity; The Law on Radioactive Wastes in Great Britain; The Treatment of Radioactive Liquid Effluents; Biological Concentration of Radioactivity and its Application to the Treatment of Liquid Effluents; The Disposal of Radioactive Elements; The Disposal of Radioactive Solid Wastes; and The Discharge of Radioactive Effluent to the Atmosphere.

With its comprehensive coverage of the implications of radioactivity regarding water supply and waste water disposal, such a book will prove of both value and interest to municipal, civil and chemical engineers, and all who are in any way connected with water supply or the disposal of industrial and domestic wastes.

Formwork to Concrete, by C. K. Austin. Publishers: Cleager-Hulme Press, Ltd., 31 Wright's Lane, London, W.8. Price 30s. 283pp.

Designed to be both a quick reference book for the site and a suitable text-book for the student, this volume deals not only with straight timber forms, but includes the application of plywood, steel, tubular steel, composition boards, plastic facings, and the preparation of mould boxes for precast work.

The text is liberally sprinkled with clear, simple sketches, which in the main have been successfully arranged to face the appropriate passage. Other features, incidental to the main purpose of the book, include suggestions on ways to minimise blunting of tools and hints on planning and economic methods of working.

Among the many types of concrete formwork to which chapters are devoted are moving forms to walls and silos; continuously sliding forms; chimney forms; rib floors; casings to structural steel; forms for conduits and culverts; and bridge centring.

NEWTON CHAMBERS/KOEHRING SALES AGREEMENT

Details are announced of the plant to be sold under the recent agreement between the Newton Chambers Group and the Koehring Company of Milwaukee.

Under this agreement, NCK-Rapier, Ltd., 32 Victoria Street, London, S.W.1, become exclusive selling agents for the Koehring Company in the eastern hemisphere, excluding Japan. In addition to the Koehring excavator-crane models built under licence by Newton Chambers at Thorncliffe, Sheffield, NCK-Rapier will now sell Koehring cranes and other equipment built in the U.S.A. but not yet made in England.

The new list comprises principally truck crane models 330 lifting 60,000lb., 445 lifting 90,000lb., 555 lifting 110,000lb. and cruiser crane models 218 lifting 36,000lb. and the 305 lifting 50,000lb.

Two other main models on the list are the 330 Sprawler which will lift 60,000lb., and the model 805 Crawler, which has a shovel bucket capacity of 2 cu. yd. and can be rigged as a dragline, grab crane or lift crane, with a crane capacity of 104,200lb.

One item in the 205 model range not built by Newton Chambers but which can be supplied by Koehring is the Railaid, a rail carriage for the 205 model. Outside the field of excavators and cranes, NCK-Rapier will sell Koehring's Mudjack concrete maintenance machines and Kamo drilling tools.

WHERE ARE THE HOUSES TO GO?

With reference to our recent report on Mr. Max Lock's Paper "Where are the Houses to Go?", the figure of 80 persons to the acre should, of course, have read 30 persons.

Trade Section

FOUR-WHEEL DRIVE MERTON FRONTLOADER 65A NOW IN PRODUCTION

THE first of a new range of four-wheel drive loading shovels is now in production, announce Merton Engineering Co., Ltd., Faggs Road, Feltham, Middx.

Based on the two-wheel drive Frontloader 59 this new model, known as the Frontloader 65A, incorporates the main design features of that machine, i.e., front-mounted driver's position; semi-automatic hydraulic controls; 45 degree bucket crowd angle; 10ft. 8in. clear discharge

differential, crown and pinion spiral bevel primary reduction and final planetary reduction at the hubs. Steering of the rear wheels is power-assisted, through a heavy duty Marles cam and double roller type steering box.

Hydraulic braking is of the internal expanding shoe type with Hydrovac servo assistance. Wheels are fitted with 12.00 x 24 8-ply earthmover tyres with 13.00 x 24 tyres as optional.

All hydraulic rams are double-acting and



Frontloader 65A

height (12ft. 9in. under hinge pin); maximum reach of 4ft. 10in.

The power unit of the new Frontloader is the Fordson Major four-cylinder diesel engine which at 2,250 r.p.m. develops 61.5 b.h.p. The drive is transmitted to the four equal-size driving wheels through a single-stage 3:1 stall ratio hydraulic torque converter and full power-shift epicyclic gear train.

Two forward and one reverse speeds are provided giving 0-4.8, 0-10.5 and 0-5.3 m.p.h., respectively.

The driving axles have a four pinion

are controlled through a valve which has detent positions to give semi-automatic "raise" and "float" for faster working. The lifting capacity at safe working load is 4,000lb. and the maximum crowd or "pry-out" force is 10,000lb.

The standard bucket is 7ft. 1½in. wide to cover the full width of the machine and has a S.A.E. rated capacity of 1½ cu. yd. (or S.A.E. struck capacity of 1½ cu. yd.). It is reinforced with doubling plates and manganese steel wearing strips. Smaller or larger capacity buckets are also available for very heavy or lighter materials.

EXHAUST-OPERATED CLEANING AND FLAME GUN

A CLEANING gun which can be operated from the exhaust pipe of any vehicle, petrol or diesel, with an engine of more than 2,000 c.c., is now being marketed in this country by Opancol, Ltd., 20-21 Took's Court, Cursitor Street, London, E.C.4, who are also the sole concessionaire for Western Europe.

Of Canadian origin, but to be known as the Opancol Kleen Gun in this country, the equipment consists of a threaded tapered attachment which can be fitted to any exhaust; 14ft. of stainless steel flexible piping; a length of special neoprene suction hose; and an emulsifying nozzle. The exhaust gases are utilised, in conjunction with a cleaning solution of water and liquid detergent, to provide a jet of high-pressure vapour which will remove hard grease, grime and mud.

By use of a simple attachment, the gun can be converted to a flame gun operating at 1,200 deg. F., the flame jet being adjustable from 2ft. to 12ft.

No moving parts are contained within the equipment, which can be assembled and working in about three minutes. The price, without extras, is £39 10s.

SKID-MOUNTED FIBREGLASS CARAVAN

A skid-mounted caravan unit with a fibreglass shell capable of being carried on a self-loading two-wheeled float has been introduced by Scottorn, Ltd., Victor Works, Kingston Road, New Malden, Surrey.

The caravan itself is a fibreglass shell which is composed of eight moulded sections which are bonded and bolted together. This gives a flexible unit strengthened by the ribs formed by the joining together of the flanges of the moulded sections.

The self-loading float which is constructed on the lines of the company's Fezzan range of trailers, has a 1-ton winch mounted under the chassis by which means the skid-mounted unit is winched on to the trailer. This operation requires, both for loading and off-loading, only two men and it is claimed as feasible that, in an emergency, one man could carry out the loading on his own. The trailer, after being used for transporting the caravan unit can be used for normal transportation purposes, provision having been made for the use of stake sides; the load carrying capacity of the trailer is 1½ tons.

TARMAC REORGANISATION

As from October 1, all the roadstone and related surfacing activities of the Tarmac Group, including those of Tarslag, Ltd., are carried out by Tarmac Roadstone, Ltd., under the direction of Mr. R. G. Martin, managing director.

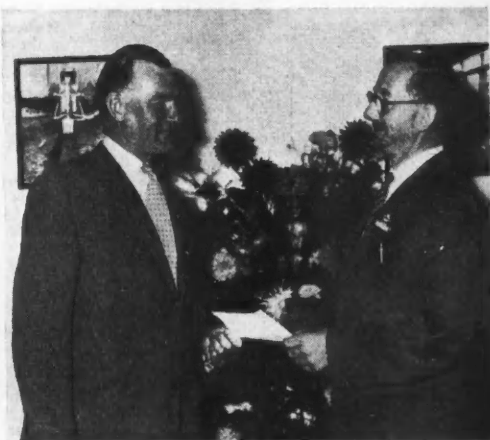
The head office of the company continues to be at Ettingshall, Wolverhampton, but in the interests of closer local control the company now operate through three main divisions.

The Northern Division is based upon Stockton-on-Tees under Mr. S. W. Sangwin, director and general manager. The Central Division is based upon Ettingshall, under Mr. G. R. Baxter, director and general manager. Rowley Regis Granite Quarries, Ltd., which is a subsidiary of Tarmac Roadstone, Ltd., operates as part of the Central Division. The Southern Division, which takes over all the trading activities of Tarmac (Southern), Ltd., is based upon London under Mr. J. B. F. Earle, director and general manager. Tarmac (South Wales), Ltd., a subsidiary of Tarmac Roadstone, Ltd., continues to operate in South Wales and the county of Dorset as part of its Southern Division.

BIG ORDER FOLLOWS DEMONSTRATION

DURING their recent "open house" week, Whitlock Bros., Ltd., received well over 1,000 guests who witnessed demonstrations of the new range of Whitlock earthmoving equipment and toured new extensions to the Great Yeldham works.

Following one of the demonstrations, which included the latest Dinkum Model "60" and "66" and the new dumper D.D."70", Whitlock received an order valued at £250,000 from William R. Selwood, Ltd., one of their distributors. The photograph shows, left to right, Mr. A. Carleton Whitlock receiving the order from Mr. William R. Selwood.



Trade Section

NEW COMPANIES

The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—

TEC Construction, Ltd., 30 Forster Road, Beckenham, Kent. £100. Directors: Ernest C. Trendle and Doreen E. Trendle, 30 Forster Road, Beckenham, Kent.

Peter Proctor (Builders), Ltd., 94 Vale Road, Sheffield, 3. £500. Directors: Peter Proctor and Mrs. E. Proctor, 94 Vale Road, Sheffield, 3.

Lela Builders, Ltd., 5 Westhead Chambers, George Street, Staines, Middx. £1,000. Directors: Bryn Jones, 78 Lela Avenue, Hounslow, Middx.; Lewis F. Hall, 37 Lela Avenue, Hounslow, Middx.; Mostyn E. Jones and George Florey.

A.C.B. (Contractors) Plant Co., Ltd., off Moor Lane, Chessington, Surrey, manufacturers of and dealers in machinery, etc. £100. Directors: Peter S. Harris, 7 Westbourne House, Mount Park Road, Harrow; Felix S. Chapman, 5 Send Marsh Lane, Ripley, Surrey. L. and J. Ford (Builders), Ltd., 30 Park Lane, Waltham Cross, Herts. £1,000. Directors: Leslie G. G. Ford, Glen Dale, Berrow Lane, Cheshunt, Herts.; Joseph Ford, 30 Park Lane, Waltham Cross, Herts.

R. H. Stephenson and Co. (Builders), Ltd., 47 Queen Street, Exeter. £1,000. Directors: Kathleen A. Weaver, 6 Raleigh Road, Exeter; Robert H. Stephenson, 70 Rifford Road, Exeter.

T. E. Wright and Son (Contractors), Ltd., 71 Saltergate, Chesterfield, building contractors, etc. £1,000. Directors: Ronald G. E. Wright, 63 Mansfield Road, Hasland, Chesterfield; Bernard T. Wright, 89 Keswick Drive, Newbold, Chesterfield.

Wetheralds (London), Ltd., 8 Otley Road, Leeds, 6, painters and decorators, etc. £10,000. Directors: Edward Wetherald, 2 Spenthorpe Avenue, Otley Old Road, Leeds (managing director); Edith Wetherald, 44 Otley Old Road, Leeds; Percival Wetherald, Park View, Zeathley, near Leeds.

E. and M. Williams, Ltd., 136 Ramillies Road, Sidcup, Kent, builders. £1,000. Directors: Ernest H. Williams, Margaret Williams and Charles P. Duckett, all of 136 Ramillies Road, Sidcup, Kent; Bernard J. Sherman, 148 Ramillies Road, Sidcup, Kent.

Herstam (Builders), Ltd., 138-9 Bush House, Aldwych, W.C.2. £100. Directors: To be appointed by subscribers. Subscribers: Michael Claff, 1 Southfields, N.W.4; Shirley Hart, 57 Rodney Court, Maida Vale, W.9.

Macnor Demolition Co., Ltd., 258 Brixton Hill, S.W.2. £1,000. Directors: Norman McKay, 24 Foxbourne Road, S.W.17; Norman McKay, jr., 24 Foxbourne Road, S.W.17.

R. N. Burrill (Contractors), Ltd., builders. £100. Directors: To be appointed by the subscribers. Subscribers: James P. Davison, 65a Fenchurch Street, E.C.2; Leonard M. Carrington, 66 Elmshurst Crescent, N.2.

Wells Brothers (Builders), Ltd., 106 Wheelers Lane, Kings Heath, Birmingham. £1,000. Directors: Thomas U. Wells, 106 Wheelers Lane, Kings Heath, Birmingham; Alfred C. Wells, 95 Harpers Road, Northfield, Birmingham.

Jack Holdsworth and Co., Ltd., 16 Seatonville Road, Whitley Bay, Northumberland, builders. £500. Directors: John C. Holdsworth, 48 Earsdon Road, Whitley Bay; William Ross, 16 Seatonville Road, Whitley Bay, Northumberland.

J. Hewison, Ltd., public works contractors, etc. £100. Directors: To be appointed by subscribers. Subscribers: J. Hewison, 14 Clavering Road, Winton, Co. Durham; J. D. Robson, "Langdale," Barlow Lane, Blaydon Burn, Co. Durham.

John Cosgrove and Sons (Builders), Ltd., 19 Dumfries Place, Cardiff. £1,000. Directors: John Cosgrove, Mrs. Lillian Cosgrove and John J. Cosgrove, all of 87 Deere Road, Ely, Cardiff.

Wright Bros. (Clayton), Ltd., Victoria Works, Arkwright Street, Clayton, Bradford, builders. £10,000. Directors: John E. Wright and Brian Wright, 175 Hawarth Road, Heaton, Bradford.

Advanced Demolition and Excavation Contractors, Ltd., 300 Mare Street, E.8. £100. Directors: Harold E. Skinner, 23 Atlas Road, Bethnal Green, E.2; Chas. T. Beck, 10 Anthill Road, Bow, E.3; Sidney T. Holt and Jas. D. Mustwayte.

E. C. Merriman, Ltd., "Homestead," Edward Street, Milford Haven, Pems., builders and contractors. £1,000. Directors: Ernest C. Merriman and Mrs. Lillian M. Merriman, "Homestead," Edward Street, Milford Haven, Pems.

Road Lines, Ltd., public works contractors, builders and contractors, etc. £2,000. Directors: Robert C. Evers (accountant) and Miss Marjorie G. Goodhew, Blossoms Inn, 23 Lawrence Lane, E.C.2.

J. Clarke (Constructions), Ltd., 30 Ship Street, Brighton, builders. £100. Directors: Anthony G. Wiles, 23 Balsdean Road, Woodingdean, Brighton; Albert E. Allwright, 26 Hurst Crescent, Portslade, Sussex; George L. Leach, 10 Brangwyn Crescent, Withean, Brighton.

B.C. Plant Hire Co., Ltd., Artillery Mansions, 76 Victoria Street, S.W.1. £100. Directors: John G. Christmas, 21 Hamny Close, Shoreham, Sussex; Richard W. Batten, The Firs, Cokeham Gardens, Sompting, Sussex; Cyril H. Wardroper, Netherdale, Hurst Road, Hassocks, Sussex.

Vincent (Ferndown), Ltd., 2 Evelyn Road, Winton, Bournemouth, builders. £1,000. Directors: Allen C. Vincent and Mrs. Constance L. Vincent, 2 Evelyn Road, Winton, Bournemouth.

D. J. Bates and Co., Ltd., 2 Yew Tree Road, Birchcliffe, Huddersfield, public works and paving contractors, building contractors, etc. £2,000. Directors: Donald I. Bates and Mollie Bates, 2 Yew Tree Road, Birchcliffe, Huddersfield.

BRITISH STANDARDS

Guaranteed Minimum Reckoners

DESIGNED by and for the building and civil engineering industries, a revised guaranteed minimum reckoner (B.S. 1151: Part 2) has been prepared by the Institution. Its contents reflect the requirements for the changes in working weeks which operate on October 3 and November 1 for building and civil engineering employees, respectively.

The standard gives the formula for calculating the appropriate "guaranteed minimum" due to an operative when the number of working hours available to him is less than the normal hours laid down in the Working Rule Agreement. In addition, four tables of ready reckoners—two for each industry—enable the actual proportions to be seen at a glance. Price 5s.

Copies of this British Standard may be obtained from the British Standards Institution, Sales Branch, 2 Park Street, London, W.1.

PLASTIC BUILDING MATERIAL ELIMINATES PLASTERING

A new building material, which can be moulded into any shape or design, has been introduced by Dohm, Ltd., 167 Victoria Street, London, S.W.1.

The material, called Dohmcast, is a compound of siliceous minerals in which each fine granule is coated with polyethylene by a special process. It can be moulded into curves, cornices, pyramids or domes, and eliminates the need for plastering. Other applications for Dohmcast are as flat, patterned or embossed tiles, which can be enamelled, painted or printed, or as mouldings to building blocks to form a finished surface. Suitable for sawing, nailing and drilling, the material can also be fixed to brick with adhesives.

Moulding may be carried out on site, the minimum apparatus needed consisting of a mild steel mould of the required shape and size, polished and chrome-plated; an infra-red or similar oven, and a press capable of exerting a pressure of 4lb. p.s.i. over the area of the filled mould.

Twelve pounds of Dohmcast, which will be sold in its powdered form, will make 1 sq. yd. of 3/16in. tiling or sheeting.

COMPANY RESULTS

The Tunnel Portland Cement Co., Ltd.—Group trading profit for the year ended March 31, 1960, £3,069,172 (£2,568,655). Net profit £2,650,964 (£2,224,147). Final dividend 11½ per cent., making 15 per cent. (12 per cent.), plus special cash distribution of 1 per cent.

Austins of East Ham, Ltd.—Group trading profit for the year ended March 31, 1960, £352,757 (£223,774). Net profit £137,124 (£84,634). Final dividend 10 per cent., making 17½ per cent. (15 per cent.).

Expandite, Ltd.—Group net profit for the year ended April 2, 1960, £126,582 (£85,567), after tax of £133,264 (£101,050). Final dividend 13½ per cent., making 20 per cent. (15 per cent.).

Ruston and Hornsby, Ltd.—Group net profit for the year ended March 31, 1960, £625,708 (£577,875). Ordinary dividend 9 per cent. (8 per cent.).

Sydney Green and Sons (Contractors), Ltd.—Group net profits for the year ended Mar. 31, 1960, £76,659 (£77,556) before charging tax of £35,542 (£33,633). Dividend 25 per cent. (same).

Robert M. Douglas (Contractors), Ltd.—Trading profit for the year ended Mar. 31, 1960, £416,458 (£661,003). Net profit after tax, etc., £234,804 (£227,327). Dividend 2½ per cent. (same).

H. Fairweather and Co., Ltd.—Group net profit for year ended May 31, 1960, £37,685 (£35,014). Dividend 18 per cent., as forecast when the shares were introduced last September.

Eastwoods, Ltd.—Group trading profit for the year ended March 31, 1960, £1,459,235 (£1,079,308). Net profit after tax, etc., £493,490 (£286,290). Recommended final dividend 12½ per cent., making 17½ per cent. for the year (15 per cent.).



Two Weatherill 2HCR "Hi-Tip" loaders being used to fill the 15ft. high aggregate bins on the £5½m. Hyde Park Corner-Marble Arch improvement scheme. The loaders, which supersede the AHH model, have a discharge height of 16ft. with a 15cwt. load

Trade Section

NEW ONE-TON DUMPER REQUIRES NO GREASING

A MK. XI one-ton dumper, featuring non-lubricant ball joints and a new constant mesh gearbox, is being produced by George Fowell, Ltd., Walsall Street, West Bromwich, Staffs.

Driven by a rear-mounted Petter PCI or AVA1 air-cooled diesel single-cylinder engine, the dumper requires no daily, weekly or monthly greasing, the only chassis lubrication necessary being periodic attention to shackles with an oil can. Millard ball joints, with a nylon seat and ball, are used, and a number of pivots and bearing surfaces have been eliminated. Ferrobestos bushes are included in the king-pin assembly.

Another feature of the machine is a new three-speed constant mesh gearbox, which, with rear wheel drive, gives speeds ranging from 2 m.p.h. in first gear to 8.63 m.p.h. in third gear. Reverse gear gives a speed of 2.21 m.p.h. The fully enclosed drive is taken from the half-speed shaft

on the PCI engine and the crankshaft on the AVA1 engine, by a heavy-duty chain to the clutch mechanism. Engine to gearbox reduction is 25/30.

The turning circle of the dumper is 16ft., and although the maximum carrying load is one ton, the hopper capacities are 17-18 cu. ft. water level, 22 cu. ft. struck capacity, and 28-30 cu. ft. heaped capacity. Finger-light steering is claimed for the



The Mk. XI dumper

machine, the whole rear frame of which is articulative to the front. Chassis dimensions include the following: wheelbase—43in.; track front—48in.; track rear—51in.; overall length—90in.; width—57in.; height—50in.; normal ground clearance—12in.; weight with AVA1 engine—14cwt.; and tyres—600 x 16.

F.M.C.I. VISIT TO EAST ANGLIA

The president, Mr. A. Yorke-Saville, and Council of the Federation of Manufacturers of Construction Equipment recently toured the Claydon Works of The British Steel Piling Co., Ltd., where they were welcomed by Mr. D. C. Bean, Mr. D. R. Thomas, the works manager, and members of the staff.

Later the party were received at the Waterside Works (Ipswich) of Ransomes and Rapier, Ltd., by Admiral R. S. Warne, managing director. In addition to the resident staff, the vice-chairman, Mr. K. E. Walker, London office manager, Mr. H. P. McClean and the general manager of NCK-Rapier, Ltd., Mr. I. S. Whiteman, were present.

After lunch the party toured the works and saw a demonstration of mobile cranes, including the Rapier 511—a 6-tonner still in prototype.

SCAFFOLDING WALL THICKNESS GAUGE

Solus-Schall, Ltd., County Building, Honeypot Lane, Stanmore, Middx., are marketing a magnetic scaffolding wall thickness gauge which, it is stated, permits rapid selection of sound steel scaffolding poles from those corroded beyond the limit of a specified safety margin.

PAYLOADER IN INTERNATIONAL EQUIPMENT DEMONSTRATION

AN advance model of the British-built Hough B.70 Payloader was seen in operation at a demonstration of International earthmoving equipment staged recently by Saville (Tractors), Ltd., at Whitehall Road, West Bromwich. Fitted with a Drott 2 cu. yd. bucket and powered by a Leyland 105 b.h.p. engine, the shovel gave a good indication of its possibilities for site

work, sand and gravel production, and stock piling.

Production of the Payloader in this country is expected to commence shortly and a provisional price of £6,300 is being quoted. This includes a 1½yd. standard bucket.

Also demonstrated was the new British-built International BTD-8 tractor which was seen scraping and 'dozing'. This tractor, described in our issue of July 14,

is powered by a specially designed International BD-281 engine developing 60 b.h.p. at a rated governed speed of 1,600 r.p.m. Maximum torque is 225lb./ft. at 1,100 r.p.m.

Other equipments demonstrated were the BTD-6 crawler tractor and the more recent BTD-20. Mr. W. P. Lumley, who introduced the machines, said that sales of the former had now well passed the 11,000 mark, and Saville (Tractors), Ltd., had been responsible for placing a very big share of this total.

Visitors to the demonstration also saw the B-41-1 crane, mounted on a B450 wheel tractor and Sherman digging equipment also mounted on a B450.



Payloader and BTD-8 operating at West Bromwich

Current Construction Activities

PROJECTS

CONTRACTS

AWARDS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the *Journal*.

BUILDING AND DECORATING (See also Housing Schemes)

Aberdeen.—North-Eastern Regional Hospital Board 1 Albyn Place, Aberdeen, have approved the erection of an out-patients' department at the Sick Children's Hospital, Westburn Drive. Estimated cost £152,000.

Anglesey.—Rofe and Raffety, consulting engineers, 3 Victoria Street, London, S.W.1, have prepared plans for the construction of an impounding reservoir at Cros-y-Bol for C.C.

Armagh.—Munce and Kennedy, 133 University Street, Belfast, are the architects for a small covered swimming pool for City Council. Estimated cost £50,000.

Aylesbury, Bucks.—B.C. have granted outline planning permission for the erection of shops with offices over and a car park at 50 Buckingham Street, for Covenant Securities, Ltd., 130 Mount Street, London, W.1.

Co. Planning Committee considering plans for the erection of Aylesbury College of Further Education at California site, Oxford Road.

Berkshire.—E.C. have included the erection of Furze Platt Infants' School at Marlow Road, and Boyn Hill Girls' Secondary School at Norden Farm site, in 1960-61 programme, estimated cost £45,000 and £110,055, respectively; to invite tenders from selected contractors for secondary modern school at Furze Platt.

Berkshire.—Co. E.C. recommended to approve construction of first stage of South East Berks College of Further Education at Bracknell, estimated cost £156,503, and new buildings for Windsor County Girls' School. £246,756.

Blackburn, Lancs.—General Purposes Committee have approved plans for a new ambulance station on a site at the corner of Addison Street and George Street West.

Bournemouth, Hants.—B.C. propose the erection of a concert hall on Bascombe Pier. Estimated cost £35,000.

Bradford, Yorks.—City architect to be instructed to prepare plans and estimates for the erection of a combined maternity and child welfare and school health service clinic at Allerton and for a small subsidiary clinic on the Wood Side estate.

City Council recommended to instruct Clyde Young and Bernard Engle, architects, 8 New Square, London, W.C.2, to prepare working drawings and invite tenders for extensions at the Margaret McMillan Memorial Training College.

City Council recommended to invite tenders for erection of a new mess room at Esholt sewage disposal works. Estimated cost £3,000.

City Architect to be instructed to prepare a scheme for erection of a new conditioning house at Mount Street, including provision of mechanical handling equipment.

City Council recommended to approve modernisation of canteen at Thornbury Works. Estimated cost £13,650.

City Council recommended to approve sketch plans and instruct Sir John Burnett, Tait and Partners, 10 Bedford Square, London, W.C.1, to prepare working drawings and invite tenders for the erection of the Belle Vue Boys' Grammar-Technical School.

City Council recommended to appoint Samuel Jackson and Son, Ocean Chambers, Piccadilly, Bradford, 1, architects, for alterations to the Browning Street premises of the Technical College.

Brandon, Dur.—Plans are being prepared by the C.W.S. Architect's Dept., 90 Westmorland Road, Newcastle upon Tyne, for the

erection of a distribution depot at Langley Moor for East Durham Co-operative Dairies, Ltd., Wingate.

Bridlington, Yorks.—B.C. recommended to approve redevelopment of the Esplanade frontage of Royal Prince's Parade between the Floral Pavilion and the information bureau. Work will involve rebuilding the cafe, etc. Estimated cost £5,100.

Brighton, Sussex.—B.C. have appointed Sir Hugh Casson, 35 Thurloe Place, London, S.W.7, as architect for the redevelopment of the 11½ acre site bounded by Kings Road, West Street and Regency Road.

Burnham-on-Sea, Som.—U.D.C. recommended to invite tenders for the construction of an open-air swimming pool. Estimated cost £15,000.

Burnley, Lancs.—Quantities are now being prepared prior to the invitation of tenders, for erection of premises at the corner of Boot Street and Croft Street for Massey's (Burnley) Brewery, Ltd., H. Hubbard Ford, architect, 35 South Audley Street, London, W.1, and Cecil F. Baker and Partners, quantity surveyors, 20 Lowndes Street, London, W.1. Estimated cost £90,000.

Bury St. Edmunds, Suffolk.—East Anglian Regional Hospital Board have appointed J. W. Stockings and Clarke, London House, London Street, Norwich, as quantity surveyors, for the conversion of ward hut 6 into dual ward at West Suffolk General Hospital.

Cheltenham, Glos.—M.E. have approved the inclusion of a new four-form entry grammar school for 750 pupils in the 1962-63 programme for E.C. Estimated cost £275,935.

Chester.—City Council recommended to apply for sanction to borrow £1,000 for the provision of sick bay accommodation at Rowland's Lodge old people's home.

City Council have approved scheme for the erection of a crematorium on site at Blaenau Cemetery.

Colchester, Essex.—B.C. propose the construction of an indoor swimming pool at junction of Boadicea Way and Shrub End Road. Estimated cost £100,000.

Croydon, Surrey.—A. Minoprio, 18 Seymour Street, London, W.1, is the architect for the erection of office blocks, shops, a restaurant and drive-in bank with parking facilities on the site of the Trinity School of John Whitgift, North End, for the Whitgift Foundation. Scheme in preliminary planning stage and outline planning approval has yet to be obtained.

Darlington, Dur.—Holy Trinity Church are seeking a site for the erection of a church to serve the Hummersknott and Mowden estates.

Markets Committee have approved in principle the erection of new canteen at Cattle Mart, for the Darlington Farmers' Auction Mart Co. Approval subject to planning permission being granted.

Darlington, Dur.—Welfare Committee have approved scheme for adaptation of former reception centre for aged and infirm people and the erection of handicraft centre at East Haven Hospital. Estimated cost £10,540 and £8,725 respectively.

Dover, Kent.—Library and Museum Committee are considering plans for the erection of new premises for the Children's Library.

Edinburgh.—Dean of Guild Court have approved the extension at Ferry Road for Ferranti, Ltd., Hollinwood, Lancs. Estimated cost £50,000.

Elham, Kent.—R.D.C. have approved erection of an aircraft hangar at Lympne Airport for Skyways Coach/Air, Ltd., Lympne Airport, Hythe, Kent.

Eston, Yorks.—North Riding C.C. recommended to provide, subject to M.E. approval, school meals accommodation and playing fields at St. Anne's R.C. Modern School. Estimated cost £6,400.

Exeter.—City Council recommended to approve plan for the provision of a kiosk shop at Eastgate. Estimated cost £1,500; erection of a bus and coach station at Paris Street. £100,000; reserve site at Dix's Field for the construction of new municipal offices and associated buildings.

Felixstowe, Suffolk.—East Anglian Regional Hospital Board have appointed B. A. Hatcher, 1 Arcade Street, Ipswich, as architect, and Caston and Porritt, 77-79 Grimwade Street, Ipswich as quantity surveyors, for alterations and additions to Felixstowe General Hospital.

Gillingham, Kent.—Borough Engineer to prepare plans for a new kitchen and dining room at Gillingham Boys' Grammar School.

Goole, Yorks.—Planning Committee have approved plans for erection of a three-storey shops at 88-90 Boothferry Road for R. Fleming and Sons.

Great Yarmouth, Norfolk.—East Anglian Regional Hospital Board have appointed Olley and Haward, 5 Queen Street, as architects for central X-ray department and adaptation of old kitchen premises at Northgate Hospital.

Halesworth, Suffolk.—East Anglian Regional Hospital Board have appointed L. N. Hyams, 29 Elm Street, Ipswich, as quantity surveyor for a new recreation hall at Risbridge Home, Kedington. Estimated cost £8,000.

Harrogate, Yorks.—Bernard Blanchard, 34 George Street, Hull, is the architect for erection of the new Woodlands Methodist Church. Estimated cost £20,000.

Harrow, Middx.—Deacon and Laing, 65 Goldington Road, Bedford, are the architects, and L. A. Francis and Sons, Vernon House, Sicilian Avenue, Bloomsbury Square, London, W.C.1, the quantity surveyors, for an extension to the existing store at Station Road, for Sopers of Harrow, Ltd.

Haxby, Yorks.—North Riding Co. E.C. have approved sketch plans for branch library.

Holmforth, Yorks.—U.D.C. recommended to instruct the architects to prepare drawings, etc., and invite tenders for the second stage of the town hall reconstruction. Estimated cost £5,500.

Houghton-le-Spring, Dur.—Conversion of the Coliseum Cinema, Newbottle Street, into shop premises for the Howard Collings Group of Companies, London, proposed. Ivor Hodges, architect, 10 Grays Inn Square, London, W.C.1.

Ipswich, Suffolk.—Johns, Slater and Haward, 32 Foundation Street, are the architects for the erection of a public house at Maidenhall estate, for Ind Coope (East Anglia), Ltd., The Brewery, Romford.

East Anglian Regional Hospital Board have appointed L. and P. Barefoot, 22 Thorofare, as architects, and Caston and Porritt, 77-79 Grimwade Street, as quantity surveyors for extension to dental department at the Anglesea Road wing of Ipswich and East Suffolk Hospital.

Isle of Thanet, Kent.—South East Metropolitan Regional Hospital Board are preparing plan for the first phase of development of Margate General Hospital, comprising an out-patients' department with connecting corridor, basement storage and extension to the boiler house.

Isle of Wight.—E.C. have approved schemes for a secondary modern school at Pell Lane, Ryde, and school for educationally sub-normal children at Watergate Road, Newport. Estimated cost £197,825 and £55,731, respectively.

Langley, Bucks.—Pasolds, Ltd., to erect a 120,000 sq. ft. single-storey warehouse. Estimated cost £180,000.

Lowestoft, Suffolk.—Posford, Pavry and Partners, Abbey House, Victoria Street, London, S.W.1, are the consulting engineers and Martin Hutchinson of Hutchinson and Mitchell, 37 Great James Street, Bedford Row, London, W.C.1, the associate architect, for a factory at Waveney Drive, for Boulton and Paul, Ltd. Scheme in early planning stage.

Loddon, Norfolk.—East Anglian Regional Hospital Board have appointed A. F. Scott and Sons, 23 Tombland, Norwich, as architects for completion of operating Hales Hospital. Estimated cost £12,500.

Maidenhead, Berks.—Goldard and Smith, planning consultants, 22 King Street, St. James's, London, S.W.1, are preparing scheme for the redevelopment of the town centre for B.C.

Maldon, Essex.—R.D.C. have approved layout plans for the demolition of all existing Council buildings and erection on site of new Council offices. Estimated cost £80,000.

Mansfield, Notts.—B.C. recommended to approve plans and invite tenders for the erection of combined public conveniences and bus shelter at Meden Square, Pleasley Hill.

March, I. of E.—U.D.C. recommended to prepare scheme for improvement to 16 dwellings at Wisbech Road.

Middlesbrough, Yorks.—Union International Co., Ltd., London, are negotiating with the B.C. for lease of land at the corner of South Bank Road and Cargo Fleet Lane, for the erection of an abattoir and ancillary premises;

Jordison and Co., Ltd., Marton Road, propose new works and offices in Longlands Road; plans approved for new department of physical medicine at General Hospital for Newcastle Hospital Board. P. H. Knighton, chief architect.

M.E. have approved the E.C.'s scheme for extensions to Constantine Technical College at a cost of £745,000. No detailed plans have yet been prepared. Sketch plans have also been approved for additions to Easterside Primary School and Langbaugh Secondary School.

Housing Committee has provisionally allocated a site at Berwick Hills for a district centre to include swimming baths, health centre, branch library, community centre and site for the Joe Walton Boys' Club.

Newcastle upon Tyne.—Waring and Netts, 1 Lansdowne Terrace, Gosforth, are the architects for showrooms, restaurant, offices and warehouse at Low Friar Street for D. Levey; St. Andrews Motors, Ltd., St. Andrews Buildings, Gallowgate, are to erect showrooms and offices at 45-53 George Street (M. and H. Gatoff, architects, 26 Mosley Street, Newcastle); revised plans approved for converting the Albion Hotel, Clayton Street, into shop and storeroom for Marcus Levey and Co. (Fewster and Partners, architects, 22 Conduit Street, London, W.1); Norwich Union Insurance Societies, Ltd., Norwich, are to carry out alterations to 89-91 Jesmond Road to form offices and flat; Hepworths, Ltd., Claypit Lane, Leeds, 2, are to erect shop premises at 26-28 Blackett Street, and have prepared their own plans; plans in hand for factory extensions at Water Street and Penn Street for Austin Lifts, Ltd. (Tasker and Partners, architects, 25 New Bridge Street); David Brown, 10 Lambton Road, Jesmond, is the architect for R.C. secondary modern school at Benwell Village; plans are being prepared by Mauchlen, Weightman and Elphick, 12 Saville Row, for extending residential flats at 105-14 West View for L. T. Penman, Ltd.

Work is to start next year on extensions to the Students' Union and the erection of new refectory at King's College for Durham University. Planning approval received. The architect is William Whitfield, of Raglan Squire and Partners, 3 Hobart Place, London, S.W.1. Estimated cost £400,000.

Newcastle United Football Club are to erect a new grandstand at their St. James' Football Ground. The scheme is being discussed between the architect, E. M. Lawson, Barras Buildings, Barras Bridge, and the city planning authorities.

City Council's scheme for a new College of Commerce at St. Mary's precinct has been approved. It is also proposed to erect a College of Industrial Design on a nearby site, and work on both schemes is expected to start in 1962-63.

Norwich.—East Anglian Regional Hospital Board have appointed P. Pank and Partners, 15 The Close, as quantity surveyors for improved kitchen and sanitary facilities for wards 1 and 3 at the Norfolk and Norwich Hospital; A. F. Scott and Sons, 23 Tombland, as architects for improvements to laundry at West Norwich Hospital. Estimated cost £6,400.

East Anglian Regional Hospital Board recommended to authorise, subject to Ministry approval, the preparation of working drawings and bills of quantities for the erection of school buildings at Little Plumstead Hospital.

Planning Committee have conditionally approved plans for the erection of a life engineering works and office block at Sweet Briar Road for the Balding Engineering Co., Ltd., Beaver Works, Bessemer Road.

Chaplin and Burgoine, architects, 4 The Close, on behalf of R. G. Lawrence, have submitted to Planning Committee for approval plans for 20 shops, 130 flats, 25 garages and 145 parking spaces, including a six-storey block of flats at junction of Recreation Road and Earham Road.

E.C. are preparing plans for extensions to the City College and Art School. Estimated cost £200,000.

Nottingham.—City Council propose the erection of a three-storey building incorporating a youth club and old people's club at Derby Road.

Nuneaton, War.—B.C. recommended to appoint H. N. Jepson and Partners, Midland Bank Chambers Newdigate Place, as architects for the construction of public conveniences at Abbey Green; approve revised preliminary plans and invite tenders in due course for proposed swimming baths; approve in principle a proposal for a conservatory at Riversley Park. Estimated cost £5,000.

B.C. recommended to approve, subject to conditions, plans for petrol and service station and 20 lock-up garages at Attleborough Road for Monty Moreton, Ltd.; rebuilding and extension of retail shop, 4, 5 and 6 Market

Place for Marks and Spencer, Ltd., phase 2 of St. Joseph's R.C. Primary School for S. N. Cooke and Partners, architects, 34 Harborne Road, Edgbaston, Birmingham, 15.

Oxford.—City Council recommended to approve plans for the erection of public conveniences at Knights Road, Blackbird Leys estate.

Pembroke Dock.—B.C. have approved plans for the conversion of London House into a convent chapel with residence for the community for the Rev. Mother General, Chigwell Convent, Woodford Bridge, Essex. Architects for the scheme are P. and M. White, Granville House, Arundel Street, London, W.C.2.

Port Talbot, Glam.—Co. E.C. propose the erection of a new county primary school at Sandfields estate.

Prestwich, Lancs.—Co. E.C. raises no objection to plans for the erection of an R.C. grammar school for boys.

Reading, Berks.—E.C. recommended to submit to M.E. for approval, plans for an extension to Reading Technical College.

St. Andrews, Fife.—B.C. have approved plans for extensions to St. Leonards and St. Katherine's Schools for Girls, including new science departments, art rooms and gymnasium. Estimated cost £60,000.

Sheffield.—Fire Brigade Committee have approved in principle plan to move the workshops from Norton to Darnall station. Estimated cost £12,000.

Skellmersdale, Lancs.—U.D.C. have approved the erection of an automatic telephone exchange at junction of High Street and Church Road.

Stoke-on-Trent, Staffs.—City Architect to prepare sketch plans for police headquarters at Hanley.

Stone, Kent.—Parish Council propose the erection of an all-purpose building on the recreation ground, including dressing rooms, Council chamber and social hall.

Strensall, Yorks.—North Riding Co. E.C. have approved adaptation of shop premises in the High Street into branch library.

Sunderland, Dur.—R.C. church to be built at Hylton for the Diocese of Hexham and Newcastle upon Tyne. The architects are Stienlet and Son, 4 Queens Square, Newcastle upon Tyne.

Taunton, Som.—Planning Authority have approved layout plans for the development of the Priorswood area as an industrial site, for T. S. Penny (Property Development), Ltd., including the construction of a bridge over the canal and various roads. H. S. W. Stone and Partners, 20 The Crescent, Taunton, are the architects.

Thornaby, Yorks.—North Riding C.C. propose the erection of a new infant school on the Thornetree Road site.

Co. E.C. have approved sketch plans for alterations and extensions to the St. Patrick's R.C. Primary School.

Tynemouth, Northumb.—Borough Engineer to prepare a scheme for converting Cleveland Villa nursery into an occupational centre for subnormal people; detailed plans are to be prepared for the fourth stage of the East End (North Shields) redevelopment scheme. It is proposed to erect a three-storey block comprising six shops and six maisonnettes and two blocks of 12 flats and 14 maisonnettes.

Wallingford, Berks.—Co. E.C. have included extensions to Wallingford Grammar School in 1960-61 programme. Estimated cost £80,000.

Walsall, Staffs.—M.E. have approved the inclusion of county secondary school for the Beechdale estate and the completion of the Queen Mary's Grammar School at Mayfield in the 1962-63 school programme for E.C. Estimated cost £186,000 and £133,000, respectively.

Whitley Bay, Northumb.—B.C. have approved in principle a scheme for the construction of an indoor swimming pool costing £165,000. Further details of the scheme are to be prepared.

Wolverhampton, Staffs.—Ministry have approved in principle scheme for five old people's homes for the Welfare Services Committee. Estimated cost £300,000.

Plans for the first home at the Broadway, Bushbury, have been approved by Ministry. Estimated cost £83,000.

Worcester.—Magistrates have approved plans for alterations to the Bell Inn, Droitwich Road and White Hart Inn, College Street, for Flower and Sons, Ltd., Stratford-upon-Avon.

DEMOLITION

Belfast.—Housing Committee have approved in principle the demolition of 27 houses at Lonsdale Street and Eglinton Street.

Brighton, Sussex.—Ministry have allowed scheme for demolition of three houses in Waterloo Place and erection of an office block on the site for Westminster Construction Co., 36 Westminster Palace Gardens, Artillery Row, London, S.W.1.

ELECTRICAL

Bradford, Yorks.—City Council recommended to approve scheme for electric lighting improvement in the overhauling and repair workshop at Thornbury Works. Estimated cost £3,000.

Whitby, Yorks.—North Riding C.C. recommended to approve the installation of a passenger lift, etc., at County Home for the Aged at 19 Royal Crescent. Estimated cost £3,250.

GAS AND WATER SUPPLY

Bradford, Yorks.—City Council recommended to approve the laying of new water mains. Estimated cost £10,000.

Bridlington, Yorks.—Waterwork Committee are to implement a scheme to provide a water supply to an area north-east of Bampton, subject to conditions. Estimated cost £6,900.

Darlington, Dur.—B.C. to submit to the Ministry scheme for reorganising the town's water supply system. Estimated cost £140,000.

Ramsgate, Kent.—Thanet Water Board have approved scheme for laying water mains from Stirling to Spratling Street fork roads and from Manston Aerodrome to Bush Farm. Estimated cost £3,120.

Southampton.—B.C. recommended to apply for sanction to borrow £33,000 for the construction of a booster station at Woodside, Eastleigh; approve scheme for the installation of a local booster at Upton Crescent, Nursling. Estimated cost £800.

HARBOURS, PIERS AND SEA DEFENCE WORKS

Caithness.—Administration and Finance Committee propose protection works for John O' Groat's House Hotel and a cottage. Estimated cost £15,000.

Dover, Kent.—Harbour Board are considering a new scheme for reclamations at the eastern end of the harbour.

Poole, Dorset.—Ministry are to hold a public inquiry on October 11 into B.C.'s scheme for coast protection works at Sandbanks Beach. Estimated cost £77,500.

HEATING AND VENTILATING

Keighley, Yorks.—West Riding C.C. have approved installation of an oil-fired system for heating part of the divisional police headquarters and court house.

Southampton.—B.C. recommended to appoint Stinton, Jones and Partners, 21 Gloucester Place, London, W.1, as heating consultants for the conversion of boys' school at Millbrook Secondary Mixed School, Lyons, Israel and Ellis, 43 Portland Place, London, W.1, are the architects for the scheme.

HOUSING SCHEMES

Alston, Cumb.—R.D.C. are planning the erection of eight flats at the rear of the Cottage Hospital.

Antrim.—R.D.C. propose to erect 350 houses and a shopping centre on a 40-acre site at Ballycairny, McKamore.

Barnet, Herts.—U.D.C. have granted outline planning permission for the erection of flats and garages at East View for George Reed (Builders), Ltd., 255 Green Lanes, London, N.13.

Boldon, Dur.—U.D.C. planning the erection of 50 terrace houses at North Road, Boldon Colliery, and a number of bungalows are proposed on derelict gardens on the Boldon Colliery housing site; County Planning Authority have approved U.D.C.'s proposals to erect 68 houses on a site of 5.3 acres at Whitburn.

Colchester, Essex.—E. C. P. Brand, The Central Works, High Street, Braintree, propose the erection of 30 houses at Tey Road, Earls Colne.

Croydon, Surrey.—B.C. recommended to grant planning permission, subject to conditions, for the erection of 14 houses and garages at Wharnclyffe Road, for H. R. P. Owens, High Pines, Homefield Road, Upper Warlingham: four flats, eight maisonnettes and 12 garages at 51 Ashburton Road, for E. W. Waller and E. Bird, 16 Park Lane, Croydon; 15 flats and 10 garages at 15 Ashburton Road, for S. Connor (1955), Ltd., 44 Oakwood Avenue, Purley; 42 flats and 42 garages on site of Knighton Hotel, 139 Parnisford Road, for Wellwood Estates, Ltd., 2 Sloane Gardens, London, S.W.1; 47 flats and 38 garages at 252-260 South Norwood Hill, for H. B. Kingston, Ltd., and Dorrington Investment Co., Ltd., 145 London Road, Kingston-on-Thames; construction of new street and erection of (a) 24 flats and 21 garages or (b) 24 flats and 19 garages at 29-31 Haling Park Road, for Sir Lindsay Parkinson and Co., Ltd., 6 Lambeth Road, St. George's Circus, London, S.E.1; 30 flats, 15 lock-up garages and parking space for five cars at 242-246 South Norwood Hill, for House Property Advice and Mortgage, 20 Harrow Road, Monks Park; 21 flats and 16 lock-up garages at 12 and 14 Sylvan Road, for F. W. Kubach, c/o 3 Church Road, Upper

Norwood, London, S.E.19.—23 flats and 23 garages at Malatia, 78 St. Augustine's Avenue, for Abasic, Ltd., 181 Pampisford Road, Croydon; 16 flats, 24 maisonnettes and 40 garages at 45-51 Warminster Road, for M. J. Gleeson (Contractors), Ltd., 107 Baker Street, London, W.1.

Dartford, Kent.—R.D.C. propose housing development on land backing Lesley Close, Swanley.

Deal, Kent.—Town Planning Committee have granted outline planning permission for erection of 300 flats in multi-storey blocks on the site of the Mansion, Walmer Place, for Sir James Millar and Partners and Commercial Holdings Co.

Dolgellau, Merioneths.—U.D.C. to prepare final plans for the erection of 18 flats at the Lombard Street site.

Eastry, Kent.—R.D.C. have approved the erection of eight three-bedroom houses and four bungalows for aged persons. Estimated cost £22,154.

Elland, Yorks.—U.D.C. recommended to approve the erection of an initial total of 50 garages for letting to Council house tenants on various sites.

Gosport, Hants.—B.C. recommended to proceed with scheme for the erection of a block of five-storey flats adjacent to the Holy Trinity Vicarage.

Halesworth, Suffolk.—U.D.C. to erect a further 30 houses at Branfield Road estate.

Hartlepool, Dur.—Taylor and Evans, Ltd., 22 Elwick Road, West Hartlepool, are to erect groups of 50 and 66 houses in the King Oswy Drive area, and plans are being considered by the planning authorities.

Houghton-le-Spring, Dur.—Isaac Berriman, Ltd., Fence Houses, propose housing developments at North View, and similar developments are proposed at Quarry Road and Station Road, Shiny Row, for William Leech, Ltd., St. James Street, Newcastle upon Tyne.

Jarrow, Dur.—Smith Gore and Co., 81 Bonagate, Darlington, have prepared a scheme for housing developments on seven acres of land at Hedworth Town Farm, for the Church Commissioners.

Leeds.—Housing Committee have approved sites for seven blocks 23 storeys high, 10 blocks 17 storeys high and 18 blocks 12 storeys high as well as layouts for seven new estates and revised plans for the big Camp Road redevelopment area. The new blocks will have flats on 22, 16 and 11 floors, respectively, with the ground floors used for entrances, stores, caretakers' flats and ancillary purposes. Four of the 23-storey blocks, each with accommodation for 555 persons in four- and two-person flats with one five-person flat, will be built on the Camp Road estate. Two blocks are planned at Cromwell Heights, Lincoln Green (Burman-tofts) and one at Charing Cross Street, off Woodhouse Street. These flats will have 60 garages outside the block and 23 garages in the basement.

Llanelli, Carm.—B.C. are to erect 50 houses and R.D.C. 150 at various sites for employers of the B.M.C. factory at Felinfoel.

Midhurst, Sussex.—Planning Authority have approved layout of 26 dwellings and block of six garages at the Sandrock housing site, and the New Road, Midhurst housing site, for R.D.C.

Nuneaton, War.—B.C. recommended to proceed with schemes for a block of 12 three-storey flats and nine garages; a general shop store, house and garage; two-storey block of 20 old people's flats and warden's house; and a block of 36 three-storey flats and 18 garages; on infilling sites at Camp Hill estate; approve plans for 87 dwellings and 57 garages off Haunchwood Road, Wood Farm estate.

B.C. recommended to approve, subject to conditions, plans for eight houses, 58 bungalows and garages off Hickman Road for D. G. Lewis (Birmingham), Ltd., 213 Yardley Road, Birmingham, 27.

Osssett, Yorks.—B.C. recommended to approve, in principle, plans for a three-storey building, comprising two-person dwellings and two-bedroom maisonnettes as a typical three-storey block for inclusion in the Town End redevelopment scheme.

Penrith, Cumb.—U.D.C. to sell land near Holme Riggs Avenue to John Laing and Sons, Dalston Road, Carlisle, for the erection of 20 houses.

Southampton.—B.C. recommended to negotiate a tender with Dor Properties (Bournemouth), Ltd., for the erection of a 20-storey block of flats at Redbridge roundabout.

Tutbury, Staffs.—R.D.C. to submit to Ministry and C.C. for approval revised layout plans for 26 bungalows at Barton-under-Needwood and layout plans for a block of five one-bedroom bungalows for the Bridge Street site, Stretton, and for a block of two-bedroom houses (for slum clearance) at the Green site, Stretton.

Tynemouth, Northumb.—B.C. is in touch with Gregory Housing, Ltd., regarding the erection of Council houses on the Moor Park site for sale.

Details have been submitted to the B.C. of a plan for the erection of a 10-storey block of luxury flats comprising 87 flats at East Street. There will also be a cafe and restaurant and accommodation for 130 cars. The promoters are Cussins (Contractors), Ltd., The Drive, Gosforth, Newcastle upon Tyne, and the architects, Jack Cotton, Ballard and Blow, 48 Pilgrim Street, Newcastle upon Tyne.

Plans are to be prepared by J. Smeds, 56a Camden Street, North Shields, for erection of houses in Borough Road.

PLAYING FIELDS, PARKS, ETC.

Croydon, Surrey.—B.C. recommended to approve the construction of two hard surface pitches and four hard surface tennis courts at Shirley Secondary School. Estimated cost £16,000.

RIVER AND FLOOD PREVENTION WORKS

Llanelli, Carm.—Ministry have approved land drainage improvement scheme for the Dafen River to relieve flooding, for the South-West Wales River Board. Estimated cost £13,000.

South-West Wales River Board have approved British Motor Corporation scheme to divert the Dafen River near the site of the Corporation's new factory at Felinfoel. Estimated cost £20,000.

Wiltshire.—Avon and Dorset River Board propose schemes for channel improvement on the Avon, from Amesbury to Bulford, and the construction of a gauging station at East Mills, Fordingbridge.

ROADS, BRIDGES AND SITE WORKS

Ayr.—Dean of Guild Court have approved plans for preliminary works including drainage, road works and site preparation at the site of the £500,000 technical college at Dam Park. Estimated cost £28,000.

Bath, Som.—City Council to proceed with the preparation of plans for the first section of the inner circulating road, from the Old Bridge to Green Park railway station. Estimated cost £50,000.

Bexhill-on-Sea, Sussex.—B.C. have approved construction of a link road from Suffolk Road to Glovers Lane. Estimated cost £2,023.

Bridlington, Yorks.—Highways Committee to receive grant for straightening the bend and improving Bessingby Hill and improvement of the hump on the bridge over the Gypsy Race. Estimated cost £5,000.

Brighton, Sussex.—B.C. recommended to invite tenders for roadworks for 59 aged persons dwellings, at junction of Coldean Lane and Lewes Road, estimated cost £2,200; approve scheme for improvements to inner roadways at The Level, £2,690.

Calne and Chippenham, Wilts.—R.D.C. have approved schemes for caravan site at rear of Hart Close, Goatacre, and extension of the North Leaze caravan site, Corsham. Estimated cost £840 and £4,140, respectively.

Carmarthenshire.—Ministry have approved scheme for the improvement of Pontamman Road (part) for C.C. Estimated cost £9,500.

Croydon, Surrey.—B.C. recommended to submit to Ministry for approval and grant aid, scheme for widening the carriageway of Church Street by the Eagle Public House, estimated cost £4,000; approve the making-up of Purley Way to the Junior Occupation Centre, Coldharbour House, £1,500; proposal for the construction of a roundabout at junction of Upper Shirley Road, Shirley Road and Wickham Road, £28,000.

Dorset.—M.T. have approved for grant aid C.C.'s scheme for construction of a roundabout at Warmwell Cross, near Dorchester.

Lytham St. Annes, Lancs.—B.C. recommended to apply for sanction to borrow £1,394 for making-up Clarendon Road North (part) from Headroomgate Road to Backheadroomgate Road, £784; for Clarendon Road North (part) from St. Annes Road East to Back St. Annes Road East; and £2,826 for Caryl Road (part) off from Norwood Road to Highbury Road West.

Newcastle upon Tyne.—City Council in conjunction with Durham C.C. are to construct a new low-level bridge across the Tyne near the existing Scotswood Bridge. It is not expected, however, that the work will be started for at least two years, as a Parliamentary Bill has to be promoted.

Redcar, Yorks.—North Riding C.C. recommended to approve, subject to M.E. approval, site works, etc., at R.C. Modern School, estimated cost £18,845; and site works at R.C. Infant School, Mersey Road, £3,310.

Richmond, Surrey.—B.C. to consider scheme for the construction of high-level road between Kew Road railway bridge by Richmond

station and Richmond Bridge running across Sheen Road near Eton Street.

St. Ives, Hunts.—B.C. recommended to approve scheme for the improvement of Pig Lane. Estimated cost £1,000.

Stourbridge, Worcs.—B.C. recommended to approve plans for making-up Fir Grove, Wallaston.

Stroud, Glos.—Co. Highways Committee have approved schemes for improvement of London Road, Bowbridge, and junction of Bath Road and Burdett Road, Stonehouse. Estimated cost £3,200 and £1,000, respectively.

Ulverston, Lancs.—M.T. have approved the construction of a trunk road which runs from The Ellers to the main Barrow Road at Princes Street, for U.D.C. Estimated cost £70,000.

Walsall, Staffs.—B.C. recommended to apply for sanction to borrow £28,365 and £2,930, respectively for the first stage of the reconstruction of roads in Digbeth, Lower Hall Lane and adjoining area and the reconstruction of Fryers Road, Bloxwich.

Whitefield, Lancs.—U.D.C. have applied for sanction to borrow £1,350 for making-up Well Lane.

York.—North Riding C.C. recommended to approve, subject to M.E. approval, site works, etc., at the Ampleforth R.C. School. Estimated cost £4,835.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Antrim.—Ministry have approved R.D.C. plans for a sewerage scheme at Mossley and the erection of a sewage disposal plant in the vicinity.

Bexley, Kent.—B.C. recommended to invite tenders for the provision of a surface water sewer between Westwood Lane and the boundary.

Bradford.—City Council recommended to apply for sanction to borrow £93,000 and invite tenders for demolition of sulphuric acid plant; and erection of new sulphuric acid plant of the "Contact" type to burn sulphur at Esholt sewage disposal works.

Braintree, Essex.—R.D.C. to prepare, for submission to Ministry for approval, outline scheme for the construction of new sewage disposal works to serve the parishes of Coggeshall and Kelvedon. Estimated cost £177,000.

Bridlington, Yorks.—B.C. recommended to approve scheme for provision of sewer in Kingsgate.

Eastry, Kent.—Ministry have authorised R.D.C. to invite tenders for sewerage schemes for Worth and Sholden.

Exeter.—Ministry have approved scheme for the provision of a surface water sewer at Wonford Street, for City Council. Estimated cost £4,900.

Harwich, Essex.—B.C. recommended to carry out a complete survey of the sewerage system and prepare report on the prevention of flooding throughout the borough.

Henley, Oxon.—Ministry held an inquiry into R.D.C.'s application to borrow £202,000 for the construction of a main drainage scheme for Sonning Common. Howard Humphreys and Sons, 8 Francis Street, Westminster, London, S.W.1, are the consulting engineers.

Newbury, Berks.—B.C. recommended to approve, in principle, scheme for laying of a 6in. foul water sewer, the construction of a small sewage ejector station and a rising main from the pump to the sewer in King's Road. Estimated cost £3,100.

Newton Abbot, Devon.—U.D.C. to prepare detailed scheme for the construction of new sewage disposal works at Forde Road. Estimated cost £104,000.

Tenterden, Kent.—R.D.C. to reinstate tenders for the High Halden main drainage scheme.

West Hartlepool, Dur.—B.C. recommended to spend £1,169,000 to prevent pollution of local beaches by untreated sewage. It is proposed to construct three pumping stations and lay 9,000ft. of sea-bed pipe sewer to carry sewage well out to sea. The first stage of the work, which it is hoped to start in 1962, will involve the building of the three pumping stations.

Weston-super-Mare, Som.—B.C. have approved scheme for the prevention of flooding in the Milton Road/Milton Green area. Estimated cost £1,000.

STREET LIGHTING

Croydon, Surrey.—B.C. recommended to approve, subject to Ministry approval, stage 3 of improved lighting programme involving 29 streets. Estimated cost £17,000.

Elstree, Herts.—Parish Council propose scheme for the installation of lighting in Barnet Lane. Estimated cost £1,370.

Meltham, Yorks.—U.D.C. have approved scheme for replacing the existing street gas lamps with electric lamps. Estimated cost £2,057.

CONTRACTS

Full details of the Contracts marked * will be found in our Advertisement Columns.

BUILDING AND DECORATING

(See also Housing Schemes)

Aberdeen.—Erection of new technical subject wing at Ellon Academy for C.C.: (1) Excavator, mason, brick, concrete, plaster and roughcast works; (2) carpenter, joiner and ironmongery works; (3) plumber work; (4) electrical work; (5) painter and glazier works. Contractors may tender for one or more trades. Applications immediately to E. L. Williamson, architect and surveyor, 14 Golden Square, Aberdeen.

Armagh.—Erection and completion of a home for old people at Gilford Road, Portadown, for County Welfare Committee. Documents from the offices of W. H. Stephens and Sons, chartered quantity surveyors, 40 High Street, Portadown. Deposit £5 5s. Tenders by Oct. 28.

Aylesbury, Bucks.—Erection of public conveniences, Cambridge Street, and alterations to existing public conveniences, Cattle Market, for B.C. Documents from the Borough Engineer and Surveyor, Friarscroft, 3 Oxford Road, Aylesbury. Deposit £2 2s. Tenders by Oct. 25.

Ballycastle, Antrim.—External painting at Dalriada Hospital. Documents from T. J. Sheehan, secretary, Dalriada Hospital, Ballycastle. Tenders by Oct. 11.

Batley, Yorks.—Alterations to the housing office, Town Hall, for B.C., comprising the erection and decoration of framed and glazed partitioning, and consequential works to heating and electrical services, etc. Documents from the Borough Engineer, West House, Hanover Street, Batley. Tenders by Oct. 11.

Belfast.—Supply and fixing of glazed metal screens and doors for City Council. Documents from the Education Architect's Department, 40 Academy Street, Belfast, 1. Tenders by Oct. 20.

Birkenhead, Ches.—Erection of 12 shops and 13 maisonnettes at Woodchurch estate, contract 21, for B.C. Documents from the Borough Architect, 3 Conway Street, Birkenhead. Deposit £2 2s. Tenders by Oct. 12.

Birkenhead, Ches.—Erection of a fire station and two houses on the Woodchurch estate, for B.C. Applications to Gornall, Kelly and Partners, chartered architects, 155 The Albany, Old Hall Street, Liverpool, 3, by Oct. 12. Deposit £2 2s. Tenders by Nov. 7.

Bury, Lancs.—Internal decorations at (a) Walmsley Junior School, (b) public baths, (c) Listerfield House, for B.C. Documents from Borough Engineer, Town Hall, Bury.

Caernarvonshire.—Erection of additional laboratory at Bangor Girls' Grammar School for C.C. Submit names to the Director of Education, Education Offices, Caernarvon, by Oct. 7. Deposit £2 2s., cheque payable to County Treasurer.

Carlton, Notts.—Erection of the following buildings: Stores and office block, canteen block, garage and workshop block, and stores and garages block, together with incidental works, at the proposed works and ways depot, Greenhill Road, for U.D.C. Documents from the office of the Engineer and surveyor, Council House, Burton Road, Carlton. Deposit £2. Tenders by Oct. 19.

Carmarthenshire.—Erection of a Medway standard classroom unit and alterations to the existing premises at the Secondary Modern School, Llanybyde, for Co. E.C. Applications W. T. Lloyd, county architect, County Hall, Carmarthen, by Oct. 8. Tenders by Oct. 31.

Dover.—Improvements and major repairs to three of the Maison Dieu estate properties for B.C. Documents from the Borough Engineer, Brook House, Dover. Tenders by Oct. 17.

Downpatrick, Down.—Supply, fabrication, assembly and erection on prepared foundations of structural steelwork for Head Post Office for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by Oct. 17.

Dungannon, Tyrone.—Extensive works of improvement and repairs to 19 cottages at Aghareany, Donaghmore, for R.D.C. Documents from the Engineer to the Council, Rural Council Offices, Dungannon. Deposit £3 3s. Tenders by Oct. 28.

Durham.—Following for C.C.: High Coniscliffe New County Junior and Infant School—erection; Frosterley South County School—(a) additions and alterations, (b) supply and erection of structural steelwork; Newton Aycliffe Maternity and C.W. Centre, School Clinic and Branch Library—erection; Easington Aged Persons' Hostel—(a) cork tile flooring, (b) vinyl asbestos tile flooring; East Boldon Aged Persons' Hostel—(a) cork tile flooring, (b) vinyl asbestos tile flooring. Applications to the County Architect, South Street, Durham, by Oct. 12.

Edenbridge, Kent.—Construction of conveniences at the Lingfield Road recreation ground for Parish Council. Documents from the office of the Clerk to the Council, Sunways, Edenbridge. Tenders by Oct. 28.

Edinburgh.—Northern General Hospital, structural alterations and improvements to Ward 4, for Board of Management. Applications to Henry Wylie, 15 Moray Place, Edinburgh, 3, by Oct. 12.

Essex.—Erection of Colchester Pettygate County Infants' School, for C.C. The work consists of a single-storey building with steel frame and load-bearing brick walls, estimated cost £42,000. Applications to H. Conolly, county architect, County Hall, Chelmsford, by Oct. 8.

Forehoe and Henstead, Norfolk.—Construction of a central depot at Ketteringham, comprising garage, workshops and stores with a total floor area of approx. 13,000 sq. ft., together with incidental site works for R.D.C. Applications to W. A. Jones, engineer and surveyor, Ber House, 158 Ber Street, Norwich, before Oct. 10. Deposit £2 2s. Tenders by Nov. 19.

Freebridge Lynn, Norfolk.—Improvements to pre-war dwellings, Great Massingham, for R.D.C., consisting of alterations and/or additions, including drainage works, to existing premises to provide bathrooms, etc. Documents from Lea, Milner and Wardley, architects, 4 Market Hill, Huntingdon, or from R. Peck, housing officer, Council Offices, 11 King Street, King's Lynn. Tenders by Oct. 12.

***Friern Barnet, Herts.**—Erection of 33 garages for U.D.C. Tenders by Oct. 26.

Harrogate, Yorks.—Erection of an implement store shed (60ft. by 16ft. by 11ft. to eaves) for B.C. The work entails approximately 115 sq. yd. of 6in. reinforced concrete flooring, precast concrete sectional building, together with Bib Six asbestos-cement roofing. Documents from C. E. Fellows, borough engineer, Municipal Offices, Harrogate. Tenders by Oct. 17.

Havant and Waterloo, Hants.—Erection of a public convenience at Southwood Road, Hayling Island, for U.D.C. Documents from the offices of the Engineer and Surveyor, 1 Park Road North, Havant. Tenders by Oct. 17.

***Heston and Isleworth, Middx.**—Reconstruction, Bridge Road depot, stage II, for B.C. Deposit £2 2s. Tenders by Nov. 4.

Hornchurch, Essex.—External redecoration of houses for U.D.C.—(Contract 1) 105 houses, (2) 128 houses. Applications to the Engineer and Surveyor, Council Offices, Billet Lane, Hornchurch, by Oct. 10. Deposit £2 2s. each.

Keighley, Yorks.—Internal painting, second class bath, Municipal Baths, Keighley. Applications to E. G. Felgate, borough architect, Borough Architect's Department, College Street, Keighley. Deposit £1. Tenders by Oct. 13.

Keighley, Yorks.—Alterations to the boiler house at Keighley Victoria Hospital for Leeds Regional Hospital Board. Applications to the Architect to the Board, Park Parade, Harrogate, by noon, Oct. 11. Deposit £2 2s., cheques payable to the Leeds Regional Hospital Board and crossed. Drawings seen at the office of Richard Pickles and Partner, architects, 1 Harrison Road, Halifax. Tenders by Nov. 2.

Maidstone, Kent.—Supply, erection and completion of restaurant at Mote Park in the form of a prefabricated demountable sectional timber building for B.C. Documents from the Borough Engineer, Palace Avenue, Maidstone. Tenders by Oct. 20.

Manchester.—Alterations to sanitary annexes, first floor of G. and L. Homes, Newholme, West Didsbury, for City Council. Documents from City Architect, P.O. Box 488, Town Hall, Manchester, 2. Tenders by Oct. 13.

Manchester.—Following for Corporation Transport Department: Design and supply of steel bar reinforcement for the reinforced concrete structure for new office building, Hyde Road, Manchester, 12, having an aggregate floor area of some 50,000 sq. ft. distributed over five floors, designed with an in-situ reinforced concrete frame and precast and in-situ concrete floors. The extent of the work required to be covered in the tender will be as follows: (1) The structural design of the complete frame and floor system; (2) the preparation of schedules and drawings in sufficient detail to allow the main contractor to fix the reinforcement; (3) the supply only of steelwork bent and prepared ready for fixing; (4) the testing of concrete samples. Documents from the General Manager, Manchester Corporation Transport Department, 55 Piccadilly, Manchester, 1. Tenders by Oct. 28.

Newtonabbey, Antrim.—Design, supply, fabrication and erection of structural steelwork for a factory at Carnmoney Newtownabbey, for Ministry of Finance. Tenderers should note that tenders will not be considered unless accompanied by steelwork designs. Documents from Room 14, Chichester House, 64 Chichester Street, Belfast, 1. Tenders by Oct. 20.

Northamptonshire.—Brackley Magdalen College School, extensions comprising a two-storey block in stone and brickwork construction for C.C.: (a) Erection, (b) heating, domestic hot and cold water installations, (c) electrical installation. Applications to the County Architect, County Hall, Northampton, by Oct. 10.

Northwich, Ches.—Construction of material storage bays at the Council depot at Whitehall, Hartford, for R.D.C. Documents from the offices of the Engineer and Surveyor, Whitehall, Hartford, Northwich. Deposit £1 1s. Tenders by Oct. 13.

Nottingham.—Construction of a refreshment kiosk on the Forest Recreation Ground for City Council. Documents from H. McD. Lawson, acting city engineer and surveyor, The Guildhall, Nottingham. Deposit £2 2s. Tenders by Oct. 26.

Nottingham.—Traditional construction of a hostel for 50 aged people at Beckampton Road, Bestwood Park estate for City Council. Documents from H. McD. Lawson, acting city engineer and surveyor, The Guildhall, Nottingham. Deposit £2. Tenders by Oct. 28.

Orpington, Kent.—Public conveniences of approximately 620 sq. ft., High Street, St. Mary Cray, for U.D.C. Applications to L. W. Freeman, engineer and surveyor, Civic Offices, The Walnuts, High Street, Orpington, by Oct. 10. Deposit £2. Tenders by Nov. 10.

Perth and Kinross.—Painter work required for school properties for Joint C.C. Applications to the County Architect, County Offices, York Place, Perth, by Nov. 15.

Rugeley, Staffs.—Modernisation of 450 pre-war Council houses for U.D.C. The contract will be valued between £75,000 and £100,000. Written applications to The Housing Manager, The Town Hall, Rugeley.

Salford, Lancs.—Proposed multi-storey block of administrative offices at Crescent for City Council. Documents from the City Engineer and Surveyor's Department, Town Hall, Salford, 3. Deposit £5 5s. Tenders by Oct. 24.

Stoke-on-Trent, Staffs.—Proposed College of Catering and Food Technology for City Council: (a) Erection of building; (b) heating, hot water, gas and mechanical ventilation; (c) electrical installation; (d) metal windows. Written applications to the City Architect, Kingsway, Stoke-on-Trent, by Oct. 11. Deposit £2 each. Tenders by Nov. 4.

Stornoway, Ross and Cromarty.—Construction on South Beach-Quay Street of a building containing Customs house, Government offices and two-flatted houses of five apartments for Pier and Harbour Commission; several works, comprising demolition and site clearance; concrete, brick, etc.; structural steelwork; joiner, etc.; glazier; slater and roughcast; bituminous felt roofing; plaster; tile and marble; plumber and painter works; central heating work and electrical work. Applications to Gratton and McLean, architects, 21 Woodside Terrace, Glasgow, by Oct. 13. Plans also seen at Municipal Buildings, Stornoway.

Sunderland, Dur.—Major extensions to the Sunderland Training College for B.C., comprising a four-storey hostel block, a two-storey teaching block and a single-storey communal block, together with alterations to the existing premises. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Deposit £2 2s., cheques payable to Corporation. Tenders by Oct. 28.

West Riding.—Erection of a clinic at Thurnscoe for C.C. Applications to the County Architect, Bishopgarth, Westfield Road, Wakefield, by Oct. 14. Tenders by Nov. 14.

West Riding.—Erection of a clinic at Dinnington for C.C. Applications to the County Architect, Bishopgarth, Westfield Road, Wakefield, by Oct. 14. Tenders by Nov. 14.

West Riding.—Extensive minor repairs, prior to painting, at the Bentley Toll Bar Primary School, Toll Barr, Bentley, near Doncaster, for C.C. Documents from the Divisional Education Officer, County Area Offices, Station Road, Doncaster. Tenders by Oct. 14.

Whitby, Yorks.—Renovation and extension of the Khyber Pass public conveniences for U.D.C. Applications to the Engineer and Surveyor, The Council Offices, St. Hilda's Terrace, Whitby.

Whitby, Yorks.—Supply and fitting of shop fronts for the three lock-up shops in the Green's Yard redevelopment scheme for U.D.C. Applications to N. T. Rider, architect, 224 Hagley Road, Birmingham, 16.

Woodstock, Oxon.—Erection of a block of seven garages at Cockpit Close, Rectory Lane, for B.C. Documents from Harry W. Smith and Son, architects, 29 George Street, Oxford. Deposit £1 1s.

Worcester.—Schools redecoration, 1960—interior programme for City Council: (Contract 16) Nunnery Wood Secondary Modern

School, F block (part only); (20) St. Clement's School. Documents from City Engineer and Surveyor, 22 Bridge Street, Worcester. Deposit £2 2s., cheques payable to Corporation. Tenders by Oct. 11.

York.—Erection of the following for City Council: (a) A youth centre at Wains Road, Moor Lane estate, Dringhouses, York; (b) 62 dwellings at Windsor Garth, Acomb, York. Documents from E. Firth, city architect, 8 St. Leonard's Place, York. Deposit £3 for either or both, cheques payable to Corporation. Tenders by Oct. 28.

CLOTHING AND TEXTILES

Belfast.—Supply and delivery of the following for City Council: (a) Uniform clothing; (b) caps and hats; (c) waterproof clothing; (d) protective clothing to the several Corporation departments during the 12 months commencing Jan. 1, 1961. Documents from Town Clerk's Office (Room 7), City Hall, Belfast, 1. Tenders by Oct. 20.

Stanley, Dur.—Supply of the following articles of protective clothing of varying sizes for U.D.C.: 185 bib and brace overalls; 172 boiler suits. Tenders, in plain sealed envelopes, endorsed "Protective Clothing," together with samples of materials, not later than Oct. 17, 1960, to J. J. Shipston, clerk of the Council, Council Offices, Stanley, by Oct. 17.

DEMOLITION

Belfast.—Demolition of brick chimneys and other structures at East Bridge Street Electricity Station for City Council. Documents from the Electricity Department, East Bridge Street, Belfast, 1. Deposit £2 2s., cheques payable to Electricity Department. Tenders by Oct. 14.

Cambridgeshire.—Demolition of The Triangle Cottage, Bottisham, at the junction of Tunbridge Lane and High Street, Bottisham, contract 6015, for C.C. The cottage and out-buildings are to be completely removed, all materials to become the property of the contractor. Documents from the County Surveyor, Shire Hall Cambridge. Tenders by Oct. 21.

***Chorley, Lancs.**—Demolition works for B.C. Deposit £2 2s. Tenders by Oct. 21.

***Harrogate, Yorks.**—Parliament Street improvement for B.C. Tenders by Oct. 17.

FENCING

Eccles, Lancs.—Supply and erection of wrought-iron fencing at the following for B.C.: (a) Winton Park (611 lin. yd.); (b) Ryder Playing Fields (84 lin. yd.). Documents from the Borough Engineer and Surveyor, Town Hall Annexe, Irwell Place, Eccles. Tenders by Oct. 13.

Northern Ireland.—Renewal of fencing at the following for Housing Trust: (a) 263 dwellings at Londonderry (Creggan) site; (b) 174 dwellings at Cregagh. Documents from the offices of the Trust, 12 Hope Street, Belfast, 12. Tenders by Oct. 17.

Romford, Essex.—Erection of approx. 315 lin. yd. of 6ft. high concrete palisade fence and 25 lin. yd. of 6ft. high chain link fence, together with the demolition of underground air-raid shelters, grading and other incidental works for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Romford. Deposit £2 2s. cheque. Tenders by Oct. 14.

Wanstead and Woodford, Essex.—Supply and erection of approximately 450yd., 5ft. chain link fencing and angle-iron gates at Broadmead Road, Woodford Green, for B.C. Documents from the Borough Engineer, Municipal Offices, E.18. Deposit £2. Tenders by Oct. 14.

GAS AND WATER SUPPLY

Birmingham.—Laying and jointing of approximately 4,450yd. of 24in. diameter concrete-lined steel main along Bells Lane, Druids Lane, Maypole Lane and High Street, in Birmingham and Solihull, with the construction of valve chambers, washouts and other ancillary works, contract 249, for City Water Department. Documents from A. E. Fordham, general manager and secretary, City of Birmingham Water Department, Council House, Edmund Street, Birmingham, 3 (P.O. Box 49). Tenders by Oct. 21.

Blackpool, Lancs.—Broughton borehole scheme for Fylde Water Board: (a) Two submersible pumps (1 m.g.d. 300ft.); (b) two submersible pumps (½ m.g.d. 300ft.); (c) steel rising main 6in. and 8in. diameter; (d) electrical cables; (e) control switchboard. Documents from the Engineer to the Board, Sefton Street, Blackpool. Tenders by Oct. 18.

Bromley, Kent.—Providing and laying approximately 460 lin. yd. 4in. diameter water main at Norman Park for B.C. Documents from the offices of the Borough Engineer, Municipal Buildings, Bromley. Tenders by Oct. 17.

Ellesmere, Salop.—Welshampton area water supply, contract 3, for R.D.C., including the construction of about 6,900 lin. yd. of spun-iron water mains, 3in. and 5in. in diameter, and incidental works. Documents from A. H. S. Waters and Partners, engineers, 25 Temple Row, Birmingham, 2, or E. G. D. Healey, clerk of the Council, Council Offices, Ellesmere, on and from Oct. 10. Deposit £5 5s. Tenders by Nov. 4.

Melford, Suffolk.—Water mains extension, contract 10, for R.D.C., including the provision and laying of about 850yd. of 4in. asbestos-cement water main at Humble Green, Little Waldingfield, about four miles n.e. of Sudbury. Documents from the offices of Elliott and Brown, consulting engineers, Stanley House, Pelham Road, Nottingham. Deposit £4 4s., cheques payable to R.D.C. Tenders by Nov. 8.

***Forehoe and Henstead, Norfolk.**—Barnham Broom, etc., water supply for R.D.C. Deposit £5 5s. Tenders by Nov. 8.

***Haverfordwest, Pembro.**—Millin water extension for R.D.C. Tenders by Oct. 31.

Hull.—Electrical installation to 132 dwellings, Boothferry estate, for City Council. Documents from City Architect, Guildhall, Hull. Deposit £2, payable to City Treasurer. Tenders by Oct. 12.

Llanfyllin, Mont.—Llansantffrad, etc., water supply extensions for R.D.C. Deposit £5 5s. Tenders by Dec. 2.

HEATING AND VENTILATING

Keighley, Yorks.—Installation only of steam boiler and ancillary equipment at Keighley Victoria Hospital for the Leeds Regional Hospital Board. Applications to the Architect to the Board, Park Parade, Harrogate, by noon, Oct. 11. Deposit £2 2s., cheques payable to the Leeds Regional Hospital Board, and crossed. Drawings seen at the office of R. W. Gregory and Partners, consultant engineers, 1 Brazenose Street, Manchester, 2, or at the Hospital.

Peebles.—Installation and setting to work of a scheme of central heating for the Bonny-craig filter station which is now under construction for B.C. Submit names to Babbie, Shaw and Morton, consulting engineers, 17 Blythswood Square, Glasgow, C.2.

***Southampton.**—Mechanical services at College of Technology for B.C. Apply by Oct. 14. Tenders by Nov. 21.

Tyrone.—Heating installation in the Maternity and Child Welfare Clinic, Dungannon, for County Health Committee. Documents from McCandless and Barton, consulting engineers, 6 Murray Street, Belfast 1. Deposit £3 3s. Tenders by Oct. 17.

HOUSING SCHEMES

***Berkshire.**—Road and sewer works for Private Estate. Deposit £2 2s. Tenders by Oct. 28.

Blackpool, Lancs.—Grange Park estate extension, contracts 12, 14, 15—erection of 102, or alternatively, 111, one-bedroom flats with stores and 59 garages, to be commenced shortly for B.C. Applications to the Borough Surveyor, Municipal Building, P.O. 17, by 2.30 p.m., on Oct. 14., giving details of contracts of similar size and character carried out, labour force, plant and technical supervisory staff available and trades to be sub-contracted. The contract is to be completed in 75 weeks.

Bognor Regis, Sussex.—Erection of a block of 34 flatlets for elderly persons, including communal rooms and ancillary works, at Corbishley Road for U.D.C. Applications to the Engineer and Surveyor, Town Hall, Bognor Regis, including a list of building contracts recently carried out and the names of two architects for whom the contractor has worked. Deposit £3 3s. Tenders by Nov. 4.

Buckinghamshire.—High Wycombe, Hatter's Lane School, two caretaker's houses, for C.C. Applications to the County Architect, County Offices, Aylesbury. Deposit £3 3s. Tenders by Oct. 31.

Chesterton, Cambs.—Twelve bungalows at Histon for R.D.C. Documents from the office of the Architect, County Hall, Hobson Street, Cambridge. Deposit £2 2s., cheques payable to R.D.C. Tenders by Oct. 21.

Cookstown, Tyrone.—Completion of two farmworkers' cottages at Loughry Agricultural College for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Deposit £2. Plans also seen at Ministry of Labour and National Insurance Local Office, Fair Hill, Cookstown. Tenders by Oct. 20.

Exeter.—Twenty-eight dwellings (traditional construction) on three sites for City Council: (Site 1)—Calthorpe Road—18 two-storey dwellings; (2) Burnhouse Lane—eight three-storey flats and maisonnettes; (3) Ludwell Lane—two two-storey houses. Applications to H. B. Rowe, city architect, Municipal Offices, Exeter, by Oct. 12.

Folkestone, Kent.—One pair houses (contract 1) one pair houses (contract 2), Tennyson Place, for B.C. Contractors should submit names for either or both contracts to the Borough Engineer, 2-10 West Terrace, Folkestone, by Oct. 10. Deposit £2 2s. each contract. Contractors must state for which of the above contracts they wish to submit a tender.

Gipping, Suffolk.—Erection of 12 one-bedroom bungalows at Windgap Lane, Haughley, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Needham Market, near Ipswich. Deposit £3. Tenders by Oct. 21.

***Havant and Waterloo, Hants.**—Erection of 12 flats, etc., for U.D.C. Tenders by Oct. 17.

Hemel Hempstead, Herts.—Four three-bedroom dwellings and eight one-bedroom flats at Waterside, Kings Langley, for R.D.C. Submit names to the Engineer and Surveyor, The Bury, Hemel Hempstead, by Oct. 14.

***Lincoln.**—Road improvement works for City Council. Deposit £2 2s. Tenders by Nov. 4.

Liverpool.—One thousand three hundred and twenty-five dwellings and 756 garages, Macker's Lane, Halewood, for City Council. Documents from City Architect and Director of Housing, Blackburn Chambers, Dale Street, Kingsway, Liverpool, 2. Deposit £2 2s., payable to City Treasurer. Tenders by Oct. 13.

***Southampton.**—Three housing contracts for B.C. Apply by Oct. 10.

***Salisbury, Wilts.**—Housing, etc., at Stratford Road for City Council. Tenders by Nov. 1.

***Wem, Salop.**—Housing development, Lowe Hill Road for U.D.C. Deposit £5 5s. Tenders by Oct. 28.

Whittlesey, I. of E.—One pair of Homeville type houses at North Green, Coates, and six Homeville type bungalows at South Green, Coates, together with paths, drains, fences, etc., for U.D.C. Documents from the Surveyor, 6 Delph Street, Whittlesey. Deposit £2 2s. Tenders by Oct. 15.

Wing, Bucks.—One pair type S houses, together with drainage and site works at Church Lane, Cheddington, for R.D.C. Documents from H. A. Rolls, architect, 15 Bridge Street, Leighton Buzzard, Beds. Deposit £2 2s. cheques payable to R.D.C. Tenders by Oct. 25.

MATERIALS AND SUPPLIES

Bishops Cleeve, Herts.—Supply of 500 2½ cu. ft. capacity galvanised dustbins to B.S.S. 792:1947, embossed B.S.U.D.C., delivered free to the depot for U.D.C. Tenders endorsed "Tender for Dustbins," to G. Norman Drinkwater, clerk of the Council, The Council House, Bishop's Cleeve, by Oct. 15.

Chingford, Essex.—Supply of the following during the year ending December 31, 1961, for B.C.: (a) Cold asphalt; (b) ballast, washed sand and soft sand; (c) cement; (d) cold bitumen road emulsion; (e) slag tarmacadam; (f) concrete paving slabs; (g) clinker; (h) solid fuel; (i) Brolac paint. Documents from the Borough Engineer, Town Hall, Chingford, London, E.4. Tenders by Oct. 14.

Isle of Wight.—Supply of replacement school furniture for C.C. Documents from the County Education Officer (FG), County Hall, Newport, I. of W. Tenders by Oct. 17.

Tottenham, Middx.—Supply of 1,000 galvanised wire mesh clothes storage baskets for B.C. Documents from the Superintendent, Central Baths, Tottenham, N.15.

Windsor, Berks.—Supply and delivery of the following materials and services for the year ending Dec. 31, 1961, for B.C.: (1) Coated macadam; (2) granite chippings; (3) refined tar and bituminous compounds and emulsions; (4) kerbs and paving slabs; (5) river ballast, sand and shingle; (6) sanitary supplies and cleansing materials; (7) chlorine gas and liquid sulphur dioxide; (8) stoneware pipes; (9) roadmen's tools and brushes; (10) dustbins and waste food bins; (11) lorry hire; (12) window cleaning; (13) decorators' materials; (14) ironmongery, plumbers' materials and chain link fencing; (15) electric lamps; (16) petrol, oil and greases; (17) cleansing of street gullies; (18) protective clothing; (19) builders' materials; (20) coal and coke; (21) electric fittings and cable; (22) towel washing and wrapping and general laundering; (23) garden materials. Documents from the Borough Engineer, Kipling Building, Alma Road, Windsor, upon receipt of a stamped addressed foolscap envelope. Tenders by Nov. 5.

PLANT AND MECHANICAL TRANSPORT

Nottinghamshire.—Supply of the following for C.C. Three footpath rollers; two lorries; one road sweeper/collector; one loading shovel; two roadbreakers; 10 trailer gritters; two snow ploughs; seven mowing machines for use with Ferguson tractors; four tipping trailers for use with Ferguson tractors. Documents from the County Surveyor, Shire Hall, Nottingham. Tenders by Oct. 22.

PLAYING FIELDS, PARKS, ETC.

Bradford, Yorks.—Holme Wood housing estate: Footpath and verge works for City Council, including flagging, soiling and landscaping work on part III and part IV of the third section. Documents from the City Engineer and Surveyor, Town Hall, Bradford. Deposit £2 2s. Tenders by Oct. 18.

East Riding.—Supplying and planting trees, shrubs and perennial flowers at Barby County Secondary School for C.C. Applications to the County Architect, County Hall, Beverley. Tenders by Oct. 28.

Weston-super-Mare, Som.—Construction Byron Road Recreation Ground for B.C. Deposit £2 2s. Tenders by Oct. 28.

RIVER AND FLOOD PREVENTION WORKS

Gainsborough, Lincs.—Construction of new steel sheet piling wall on the east bank of the River Trent, in the works of Rose Bros. (Gainsborough), Ltd., for Trent River Board. The work comprises the driving of steel sheet piling along the river frontage of approx. 180ft., the piles being between 37ft. and 50ft. in length. All piles to be tied back to concrete anchor blocks and capped with a dwarf reinforced concrete floodwall. Applications to the Engineer, Trent River Board, 206 Derby Road, Nottingham, by Oct. 10. Deposit £5, cheque payable to the board.

ROADS, BRIDGES AND SITE WORKS

Aldrincham, Ches.—Making-up four streets for B.C. Deposit £2 2s. Tenders by Oct. 31.

Amersham, Bucks.—Remedial road works for R.D.C. Deposit £1. Tenders by Oct. 28.

Amersham, Bucks.—Caravan site, Whelpy Hill, contract 1 and 2, for R.D.C. Deposit £2 2s each. Tenders by Oct. 21.

Bakewell, Derbys.—Construction of road and sewers at the Eym housing estate having approximately 1,100 super. yd. base coat tarmac and 460yd. run soil and surface water sewers for R.D.C. Documents from Arnold Lowcock, architect and surveyor, King Street, Bakewell. Deposit £2 2s. (cheques payable to R.D.C.). Tenders by Oct. 22.

Bath.—Newbridge improvement for City Council. Deposit £2 2s. Tenders by Oct. 15.

Bedfordshire.—C.198, Sundon Road, Houghton Regis, improvement fronting L.C.C. estate for C.C. Deposit £2 2s. Tenders by Oct. 21.

Bedfordshire.—Improvement at Billington Hill for C.C. Deposit £2 2s. Tenders by Oct. 21.

Bedfordshire.—Improvement at Tebworth Turn for C.C. Deposit £2. Tenders by Oct. 21.

Beeston and Stapleford, Notts.—"Guniting" repairs on 33 culings supporting Chilwell Viaduct on the Nottingham-Birmingham A.453 for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Beeston. Deposit £1 1s. Tenders by Oct. 18.

Belfast.—Following for City Council: (a) Supply and laying of rolled asphalt and mastic asphalt in carriageways, etc.; (b) removal of macadam and old asphalt surfaces from various carriageways. Documents from the City Surveyor's Department (Room 84), City Hall, Belfast, 1. Tenders by Oct. 17.

Bridgend, Glam.—Construction of the roads and sewers on the Caevary housing site for U.D.C. Documents from D. J. Amos, engineer and surveyor, Council Offices, Glan-Ogwr, Bridgend. Deposit £3 3s. Tenders by Oct. 21.

Bridgend, Glam.—Brackla Ring Road (Tremains Road), stage II, for U.D.C., including the excavation and removal to an adjacent site of approx. 6,000 cu. yd. of material, together with the necessary excavation and back filling of a trench for a water main diversion and the grading of the banks of the cutting. Documents from the office of the Engineer and Surveyor, Glan-Ogwr, Bridgend. Deposit £2 2s. Tenders by Oct. 21.

Bridgwater, Som.—Footpath and carriageway works, Westover Green, for B.C. Deposit £2 2s. Tenders by Oct. 15.

Chislehurst and Sidcup, Kent.—Roads and sewers, North Cray Place estate for U.D.C. Apply by Oct. 12. Deposit £2 2s.

Coleraine, Londonderry.—Reconstruction of Lodge Road for B.C., including drawings, specification and bill of quantities prepared by the Borough Surveyor: All necessary excavation work in carriageways, footpaths, etc., the laying of approx. 1,500 lin. yd. of sewer varying in diameter from 12in. to 6in., the laying of 1,000 lin. yd. of 8in. diameter water main, 900 lin. yd. of 3in. diameter water main, and 1,850 lin. yd. of 6in. diameter gas main, the pitching, binding and surfacing of some 12,000 sq. yd. of carriageway and some 5,000 sq. yd. of flagged footpath, together with all necessary ancillary works. Documents from the Borough Engineer, 54 Stone Row, Coleraine. Deposit £5 5s. Tenders by Oct. 15.

Dudley, Worcs.—Tipton Road bus loading bay for B.C. The work comprises excava-

tions for and the laying of 220 sq. yd. of reinforced concrete, 100yd. of kerb and ancillary works. Applications to the Borough Engineer and Surveyor, Council House, Dudley. Deposit £2 2s. Tenders by Oct. 12.

Edinburgh.—Providing and laying asphalt surfaces, etc., following abandonment of tramways in Leith Walk (from Annandale Street to Broughton Street), for City Council. Documents from City Engineer, 329 High Street. Tenders by Oct. 17.

Farnborough, Hants.—Making-up Clockhouse Road for U.D.C. Tenders by Nov. 1.

Glamorgan.—Making-up of Beaconsfield Street, Cadoxton, Neath, for C.C. The principal works comprise: Storm water sewer 6in. diameter 120 lin. yd.; carriageway foundations and surfacing 650 super. yd.; footpath foundations and surfacing 500 super. yd.; kerbing 250 lin. yd., together with incidental works. Documents from the County Surveyor, County Hall, Cardiff. Deposit £3. Tenders by Oct. 26.

Gravesend, Kent.—Construction of approx. 250 sq. yd. of flagged footpath, Sun Lane, for B.C. Documents from the office of the Borough Engineer and Surveyor, 6 Woodville Terrace, Gravesend. Tenders by Oct. 24.

Hale, Ches.—Making-up of Elmsway, Hawley Drive, The Avenue, Gilbert Road, total approx. length 680yd. for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Hale. Deposit £2. Tenders by Oct. 13.

Halifax, Yorks.—Making-up of the unnamed street leading from Burnley Road to Brow Foot Gate Lane, including carriageway, footway, and drainage works for B.C. Documents from the Borough Engineer, Crossley Street, Halifax. Deposit £1, cheques payable to Corporation. Tenders by Oct. 14.

Havant and Waterloo, Hants.—Improvement of Manor Road, Hayling Island (B.2149), at Ham Farm Corner, comprising the following work, for U.D.C.: Demolition of existing barn; 370 lin. yd. of kerbing and channelling; 300 sq. yd. of reinforced concrete haunch; 620 sq. yd. footway construction with hot rolled asphalt; 1,696 sq. yd. of carriageway surfacing with lin. thickness hot rolled asphalt; erection of fencing as accommodation works. Documents from the office of the Engineer and Surveyor, 1 Park Road North, Havant. Tenders by Oct. 13.

Hertfordshire.—Construction of Cicil Road Flyover-Barnet By-pass for Ministry of Transport. Deposit £10. Tenders by Nov. 8.

Hucknall, Notts.—Improvement and reconstruction of Papplewick Lane (C.3213) for U.D.C. The works comprise the laying of approx. 1,950 lin. yd. of kerbs; 8,860 sq. yd. of carriageway surfacing; 5,400 sq. yd. of footpath surfacing, stone and macadam foundation to carriageway; the provision of verges; 760 lin. yd. of reinforced concrete sewers, varying from 6in. diameter to 15in. diameter; street gullies and connections; 10 manholes; 34 street lighting columns, together with other ancillary and accommodation works. Documents from the office of the Engineer and Surveyor, Watnall Road, Hucknall. Deposit £2 2s. Tenders by Oct. 24.

Huddersfield, Yorks.—Making-up of the following streets for B.C.: The Grove, Fartown; Roydfield Street, Fartown. Documents from A. L. Percy, borough engineer and surveyor, High Street Buildings, Huddersfield. Deposit £1 1s. Tenders by Oct. 17.

Ipswich, Suffolk.—Supply and laying of approx. 1,000 sq. yd. of single course hot rolled asphalt (2in. thick), together with a small quantity of balancing material, at Nacton Road for B.C. Documents from the Borough Engineer, 19 Tower Street, Ipswich. Tenders by Oct. 31.

Keighley, Yorks.—Bogthorn estate, Bracken Bank, roads and sewers for B.C., approx. 700yd. in length, including excavation, carriageway and footpath construction, sewerage, etc. Documents from the Borough Engineer's Office, College Street, Keighley. Tenders by Oct. 17.

Keighley, Yorks.—Surfacing of sections of carriageway in hot-rolled asphalt for B.C. Documents from the Borough Engineer's Office, College Street, Keighley. Tenders by Oct. 13.

Leatherhead, Surrey.—Footpath resurfacing works, comprising approx. 9,200 sq. yd. bituminous surfacing for U.D.C. Documents from the Engineer and Surveyor's Department, Red House, Leatherhead. Tenders by Oct. 17.

Leighton Buzzard, Beds.—Making-up Brooklands Drive for U.D.C. Deposit £2 2s. Tenders by Oct. 31.

Llanelli, Carm.—Advanced preparation work on the housing site near Rhosnewydd, Tumble, for R.D.C. The work comprises the laying of 2,500 sq. yd. of roads, 996yd. sewers and surface water drains and other ancillary works. Documents from the Architect, 2 Queen Victoria Road, Llanelli. Deposit £2 2s. Tenders by Oct. 11.

Luton, Beds.—Riddy Lane improvement for B.C. Deposit £2 2s. Tenders by Oct. 21.

Maidstone, Kent.—Resurfacing of High Street, Maidstone, area approx. 4,400 sq. yd., in hot-rolled asphalt for B.C. Documents from the office of the Borough Engineer, Palace Avenue, Maidstone. Tenders by Oct. 17.

Midlothian.—Following for C.C.: Road improvement scheme on the Dewar Town-Gorebridge-Penicuik Road (route B.6372) at Sawmill, near Temple, comprising the realignment of approximately 600yd. of carriageway and footpaths and the construction of a 6ft. diameter reinforced concrete pipe culvert. Documents from the County Surveyor, 32 Palmerston Place, Edinburgh. Deposit £2 2s. Tenders by Oct. 17.

Newcastle-under-Lyme, Staffs.—Preliminary road and sewer works on the Thistleberry Avenue housing site for B.C.: (a) Excavation for, and provision of, 11,000 sq. yd. carriage-way foundation, etc.; (b) excavation for, and provision of, 3,300 lin. yd. of 6in. to 12in. sewers; (c) ancillary works. Documents from the office of the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, Staffs. Tenders by Oct. 17.

Newport, Mon.—Completion of roads, footpaths and advanced preparation works on the Ringland Top housing development for B.C. Documents from the office of the Borough Engineer, Civic Centre, Newport, Mon. Deposit £2 2s., payable to Borough Treasurer. Tenders by Oct. 20.

Newtownabbey, Antrim.—Asphalt surfacing of approximately 2,200 sq. yd. of footway at Antrim Road for U.D.C. Documents from the Town Surveyor, Town Hall, Newtownabbey. Tenders by Oct. 17.

Normanton, Yorks.—One thousand yards of tarmac footpath works, Ship Field housing site and Woodhouse Court flats, for U.D.C. Documents from the Surveyor, Town Hall, Normanton. Tenders by Oct. 14.

Northampton.—Reconstruction and improvement of approx. 200 lin. yd. of Bedford Road, A.428, for B.C. Documents from the Borough Engineer, Guildhall, Northampton. Deposit £2 2s. Tenders by Oct. 11.

Poole, Dorset.—Making-up approximately one mile of estate roads at Turpin Moor for B.C. Documents from Borough Engineer, Municipal Buildings, Poole. Deposit £2 2s. Tenders by Oct. 11.

Portsmouth, Londonderry.—Reconstruction of 1,440yd. of the Strand Road from The Diamond to the Strand Hotel for U.D.C. Documents from the office of the Town Surveyor, Town Hall, Portsmouth. Tenders by Oct. 11.

Port Talbot, Glam.—Construction of concrete embankment, Little Warren, Sandfields estate, for B.C., including a reinforced concrete embankment laid at a gradient, together with a 20ft. wide promenade. The wall is approx. 500yd. long and will require a total of 1,500 cu. yd. of reinforced concrete and 3,600 sq. yd. of surfacing, together with ancillary works. Documents from G. V. Griffiths, borough engineer and surveyor, Municipal Buildings, Port Talbot. Deposit £2 2s. Tenders by Oct. 17.

Romford, Essex.—Improvement to Lower Bedfords Road for B.C. Deposit £2 2s. Tenders by Oct. 17.

St. Marylebone.—St. Johns Wood Road/Grove End Road improvement for B.C. Deposit £5 5s. Tenders by Oct. 17.

Seaton Valley, Northumb.—Street works for 130 houses on Westbourne estate, Seaton Delaval, for U.D.C. Documents from the Surveyor, Council Offices, Seaton Delaval. Tenders by Oct. 15.

Sevenoaks, Kent.—Chapmans Road extension Sunbridge, for R.D.C. Construction of a hard-core and tarmac carriageway, turnround, footpaths and kerbing for a site for 32 dwellings. The work also includes the provision of 11 new gullies, a 6in. diameter surface water system with four brick manholes and two brick catchpits, the laying-out of grass areas and the construction of three clinkered garage area sites, together with spile boundary fences. Documents from the office of the Engineer and Surveyor, Inglewood, Oak Hill Road, Sevenoaks. Deposit £2 2s. Tenders by Oct. 24.

Southend-on-Sea, Essex.—Bellhouse Road improvement for B.C. Apply before Oct. 10. Deposit £2.

Staines, Middx.—Widening of part of Feltham Hill Road, Ashford, over a length of approx. 400 lin. yd., for U.D.C. Documents from the Engineer and Surveyor, 240 London Road, Staines. Deposit £2. Tenders by Nov. 3.

Stoke-on-Trent, Staffs.—Making-up of private streets A and B for City Council. Deposit £2 2s. each. Tenders by Oct. 12.

West Lothian.—Site preparation work at The Glebe housing site, Kirkliston, for C.C. Applications to John Calder, county clerk, County Buildings, Linlithgow, by Oct. 12.

Plans seen at the offices of Allison and Hutchison and Partners, architects, 4 Rothesay Terrace, Edinburgh, 3.

West Riding.—Construction and making-up of a total length of 95yd. of the private street known as Tredgold Garth, in the parish of Bramhope, in the rural district of Wharfedale for C.C. Documents from the County Engineer and Surveyor, County Hall Wakefield. Deposit £1 (cheques payable to West Riding Treasurer). Tenders by Oct. 17.

Ystradfellte, Brecons.—Improvement works to approximately 80yd. of the Heol-Capten footpath at Pontneathvaughan, for Parish Council. Details from A. G. Taylor, clerk of the Council, 18 Min-yr-Awel, Pontneathvaughan, near Neath. Tenders by Oct. 15.

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

***Aylesbury, Bucks.**—Main drainage of Hardwick and Weedon, contract 1, for R.D.C. Deposit £3 3s. Tenders by Nov. 7.

***Barnes, Surrey.**—Charles Street surface water sewer for B.C. Tenders by Oct. 27.

Beverley, Yorks.—Leven and Tickton sewerage scheme for R.D.C., involving supply and erection of pumping and ejector plant, complete with electric motors, starters and accessories, as follows: Contract 2—two 180 gallons per minute sewage pumps in pumping station at Leven; one 100 gallons per minute sludge pump in sludge pumping station at Leven; one 100 gallons per minute sludge pump in sludge pumping station at Tickton. Contract 3—two 40 gallons per minute sewage ejectors in ejector station 1 at Leven; two 30 gallons per minute sewage ejectors in ejector station 2 at Leven; two 40 gallons per minute sewage ejectors in ejector station at Tickton. Documents from John H. Haiste and Partners, consulting engineers, Belmont House, 20 Wood Lane, Headingley, Leeds, 6. Deposit £3 3s. each contract (cheques payable to R.D.C.). Tenders by Oct. 24.

***Bridgnorth, Salop.**—Highley sewerage and sewage disposal, contract 3, for R.D.C. Deposit £5 5s. Tenders by Nov. 18.

Bromley, Kent.—Construction of approx. 460 lin. yd. of 9in. diameter foul sewer and eight manholes at Norman Park for B.C. Documents from the offices of the Borough Engineer, Municipal Buildings, Bromley. Tenders by Oct. 17.

***Bury St. Edmunds, Suffolk.**—Main outfall sewer for B.C. Deposit £5 5s. Tenders by Nov. 3.

***Chesterfield, Derbys.**—Construction of Gleadless-Ford trunk sewer for R.D.C. Deposit £2 2s. Tenders by Oct. 26.

Crosby, Lancs.—Repair of a 54in. diameter cast-iron sea outfall pipe, involving excavation, piling, realigning and supporting pipe on cradles over a length of approximately 120v⁴ at Mariners Road, Blundellsands, for B.C. Documents from Borough Engineer and Surveyor, Town Hall, Waterloo, Liverpool, 22. Deposit £2. Tenders by Oct. 12.

Dungannon, Tyrone.—Construction of the Caledon sewerage scheme for R.D.C., consisting of laying 297 lin. yd. 15in., 267 lin. yd. 12in., 656 lin. yd. 9in. and 1,725 lin. yd. 6in. diameter sewer pipe, with manholes, and constructing the sewage treatment works and pump-house, together with 315 lin. yd. 4in. diameter spun-iron rising main. Documents from the Dungannon Rural District Council, Council Offices, Dungannon. Deposit £3 3s. Tenders by Oct. 13.

Dungannon, Tyrone.—Construction of the Bush sewerage scheme for R.D.C. The work consists of laying 1,030 lin. yd. 6in. and 9in. diameter fire clay pipes, together with manholes and the construction of a sewage treatment works. Documents from the offices of Dungannon Rural District Council, Offices, Dungannon. Deposit £3 3s. Tenders by Oct. 28.

Gainsborough, Lincs.—Construction of three sewerage schemes in and near Bridge Street, Trinity Street and Mayflower Close for U.D.C. The work includes construction of 270yd. of 6in. diameter concrete tube sewer; 253yd. of 9in. diameter concrete tube sewer; 625yd. of 12in. diameter concrete tube sewer; 71yd. 15in. diameter concrete tube sewer; 53yd. of 18in. diameter concrete tube sewer; and the construction or alteration of 21 manholes. Documents from the office of the Engineer and Surveyor, Council Offices, 6 Lord Street, Gainsborough. Deposit £2 (cheque payable to U.D.C.). Tenders by Oct. 17.

Godstone, Surrey.—Furze-field Road sewerage scheme, Baldwins Hill, stage 1, for R.D.C., including the laying of approximately 400yd. of 9in. and 7in. diameter stoneware pipe, together with manholes, etc. Documents from the Engineer and Surveyor, Council Offices, Oxted. Deposit £2 2s. Tenders by Oct. 12.

Havant and Waterloo, Hants.—Construction of approximately 340 lin. yd. of 15in. dia-

meter foul water sewer and ancillary works connected therewith at Fishery Lane, Hayling Island, for U.D.C. Documents from the office of the Engineer and Surveyor, 1 Park Road North, Havant. Tenders by Oct. 13.

Haverhill, Suffolk.—Reconstruction of the existing sewage disposal works, stage 2, including a new pumping station, inlet works, sedimentation tank, filter beds, humus tanks and sludge drying beds, together with the modification of existing units, and other ancillary work for U.D.C. Documents from the offices of Howard Humphreys, consulting engineers, West Street, Epsom, Surrey, until 4 p.m., Oct. 21. Deposit £3 3s., cheques payable to U.D.C. Plans also seen at the Council Offices, Haverhill. Tenders by Oct. 28.

Hexham, Northumb.—Laying 620 lin. yd. of 18in. diameter concrete pipe sewer and the construction of eight manholes in Aydon Road, Corbridge, for R.D.C. Documents from the Engineer and Surveyor, Prospect House, Hexham. Tenders by Oct. 17.

***Llwyn, Caerns.**—Extension of sewer at Garndolbenmaen for R.D.C. Deposit £3 3s. Tenders by Oct. 25.

Maldon, Essex.—Following works in the parish of St. Mary, contract 4, for B.C.: (a) Approximately 580yd. of 24in., 710yd. of 18in., 410yd. of 15in., 650yd. of 9in. and 610yd. of 6in. concrete and glazed stoneware sewers; (b) 29 concrete tube manholes; (c) brick overflow chamber; (d) minor reconstruction to existing brick manholes. Documents from Grantham, Brundell and Farran, engineers, 20 South Parade, Doncaster. Deposit £2 2s. Plans also seen at Municipal Offices, Maldon. Tenders by Oct. 18.

Morley, Yorks.—Laying of approximately 80yd. of 12in. glazed ware sewer, 11ft. deep in Rein Road, West Ardsley, for B.C. Documents from the Borough Engineer's Office, Town Hall, Morley. Deposit £2 2s. Tenders by Oct. 17.

***Neston, Ches.**—Burton Village sewerage and sewage disposal works for U.D.C. Deposit £5 5s. Tenders by Nov. 7.

***Newbury, Berks.**—Supply and erection of pumps at London Road Pumping Station for B.C. Deposit £5 5s. Tenders by Nov. 28.

Newtown and Llanidloes, Monts.—Following for R.D.C.: Laying of approximately 1,060v⁴ of 6in. diameter g.s.s. sewers and spun-iron pipes, with precast concrete manholes, etc., together with a small sewage disposal works, comprising septic tank, filter, humus tank, sludge drying beds, and approximately 166yd. of 9in. diameter spun-iron outfall pipe, together with ancillary works, at Llanidloes, situated at five miles west of Llanidloes, on the Aberystwyth road. Applications to W. Herbert Bateman and Partners, consulting engineers, Chesterfield House, Bathaston, Bath, Somerset, giving the names and addresses of at least two engineers under whose direction similar works have been carried out. Deposit £3 3s., payable to R.D.C. Plans also seen by appointment at the Council Offices, Town Hall, Newtown. Tenders by Oct. 19.

Northwich, Ches.—Reconstruction of a sewage treatment installation consisting of a brick settling tank, filter and site works at Chester Lane Brook, Marton, for R.D.C. Documents from the office of the Engineer and Surveyor, Whitehall, Hartford, Northwich. Deposit £2 2s. Tenders by Oct. 13.

Pershore, Worcs.—Regional sewerage and sewage disposal, contract 1, for R.D.C. Deposit £15 15s. Tenders by Dec. 5.

Pontardawe, Glam.—Glais sewerage scheme for R.D.C. The work comprises the provision and laying of approx. 1,100 lin. yd. of 6in. diameter stoneware sewers with outfall to the Swansea Borough Sewer at Glais, and construction of 42 manholes and other incidental works. Documents from D. S. F. Williams, engineer and surveyor, Council Offices, Pontardawe. Deposit £2 2s. Tenders by Oct. 13.

***Stratford-on-Avon, War.**—Sewerage and sewage disposal scheme, Preston-on-Stour, for R.D.C. Deposit £2 2s. Tenders by Nov. 17.

STREET LIGHTING

Billingham, Dur.—All or any of the following contracts for U.D.C.: (L.1) Supply of 15 concrete columns, A.19; (L.2) supply of 69 steel columns, A.19; (L.3) supply of 140-Watt sodium lanterns, complete with lamps and auxiliary gear; (L.4) supply of 400-Watt mercury vapour lanterns, complete with lamps and auxiliary gear; (L.5) provision and laying of cables, including servicing columns and lanterns, A.19; (L.6) erection of 84 columns and lanterns, A.19; (L.7) provision and laying of cables, including servicing columns, New Road; (L.8) erection of 33 columns, New Road; (L.9) provision and laying of cables, including servicing columns, Haverton Hill Road; (L.10) erection of 59 columns and lanterns, Haverton Hill Road; (L.11) supply of 92 concrete columns, New Road and Haverton Hill Road.

Documents from the Engineer and Surveyor, Council Offices, Haverton Hill, Billingham. Deposit £1 1s. each. Tenders by Oct. 24.

Chelmsford, Essex.—Following for R.D.C.: Provision and erection of 64 concrete group A street lighting columns, complete with side entry lanterns and ancillary equipment, on the London-Great Yarmouth trunk road, A.12, at Mountnessing, near Brentwood, Essex. The contract will include the provision of reinforced concrete columns and brackets giving a mounting height of 25ft.; 140-watt sodium discharge lamps; totally enclosed pattern lanterns; all control gear and necessary wiring. Documents from Engineer and Surveyor, Council Offices, New London Road, Chelmsford. Deposit £2 2s. Tenders by Oct. 17.

***Ellesmere Port, Ches.**—Street lighting, contract 298, for B.C. Tenders by Oct. 24.

Ellon, Aberdeens.—Supply and erection of 21 street lighting units, complete, on trunk road A.92 within the burgh for B.C. Documents from Burgh Surveyor, Station Road, Ellon. Tenders by Oct. 14.

Hitchin, Herts.—Erection and commissioning of approx. 30 class A and 65 class B lighting units in various parts of the urban district for U.D.C. Documents from Surveyor to the Council, Council Offices, Brand Street, Hitchin. Tenders by Oct. 14.

Kirkburton, Yorks.—Supply and installation of 88 lighting points on Penistone Road (second part) for U.D.C. Each point consists of a 200-W sodium discharge lamp mounted on a 35ft. steel column. Documents from the Surveyor, Town Hall, Kirkburton. Tenders by Oct. 19.

Knaresborough, Yorks.—Street lighting Bond End/Boroughbridge Road. Supply and erection of 50 group A concrete columns with sodium discharge lamps and control gear, for U.D.C. Documents from the Engineer and Surveyor, Knaresborough House, Knaresborough. Tenders by Oct. 17.

***Leighton Buzzard, Beds.**—Street lighting improvement for U.D.C. Deposit £2 2s. Tenders by Oct. 31.

***St. Faith's and Aylsham, Norfolk.**—Street lighting equipment for R.D.C.

Seaton Valley, Northumb.—Supply and erection of 327 lighting units and for the supply only of 132 lighting units for U.D.C. Documents from the Surveyor, Council Offices, Seaton Delaval, Whitely Bay. Tenders by Oct. 22.

Sunderland, Dur.—Laying of approximately 2,000 lin. yd. of 4-, 3- and 2-core paper insulated lead covered steel tape armoured cable for B.C. Documents from the Borough Engineer, 27 Fawcett Street, Sunderland. Deposit £2 2s. Tenders by Oct. 19.

***Whitchurch, Salop.**—Street lighting scheme, phase 1, for U.D.C. Deposit £2 2s. Tenders by Oct. 26.

INTERNATIONAL CONTRACTS

Iraq.—Main civil engineering works, for the construction of an international airport at a site at Qasr-el-Meleh, approximately 20 km. west of the centre of Baghdad, for Ministry of Communications. The principal works consist of the construction of the following: A runway, 3,000 m. long and 45 m. wide; a main taxiway; exit taxiways and aprons; secondary access roads; complete airfield lighting installation; water mains; fire mains; complete sewerage system with treatment plant. Documents from the Directorate General of Roads and Bridges, Baghdad, between Sept. 28 and Dec. 15, upon payment of £100 which is not returnable. Documents may be inspected on or after Sept. 28 at the offices of Sir Alexander Gibb and Partners, Queen Anne's Lodge, Westminster, London, S.W.1. Tenders by Jan. 15.

Mauritius.—Design, supply and delivery—in a period of 12 months—of between 1,000 and 3,000 austerity cyclone-resistant houses, the total cost of which shall not exceed £250 per unit, which includes provision of foundations, floor slab and erection of superstructure by the Authority, contract 1/60 for the Central Housing Authority. Apply immediately for particulars to: The Crown Agents, 4 Millbank, London, S.W.1, quoting reference Q/EC3/Mauritius 9725. Units are to be prefabricated, probably in timber, suitable for erection by the Authority on prepared sites. Tenders by Nov. 15.

Rangoon, Burma.—The Board of Management for the Port of Rangoon invite crane building firms to tender for the supply, delivery and supervision of erection in Rangoon of six three-ton electric level-luffing portal cranes for operation on their Sule Pagoda Wharves 5, 6 and 7, contract 3. Documents from Sir Alexander Gibb and Partners, consulting engineers, Queen Anne's Lodge, Westminster, London, S.W.1, on payment of £8 per set. Tenders by Jan. 7 to Rangoon.

AWARDS

BUILDING AND DECORATING
(See also Housing Schemes)

- Aberystwyth, Cards.**—Reconstruction of the Town Hall for B.C.—Norwest Construction Co., Ltd., Ruthven Road, Litherland, Liverpool, £53,955.
- Alston, Cumb.**—Additions to Alston Cottage Hospital for Newcastle Regional Hospital Board. Plans by N. Edgar, regional architect—H. Kearnson and Son, Market Place, Alston, £3,000.
- Armagh.**—Erection of an additional classroom to Killivie County Primary School for Co. E.C. G. D. Taylor, architect, 27a English Street, Armagh—S. and G. Lester, English Street, Armagh, £1,763.
- Armagh.**—Improvements (including heating and plumbing installations), Collone County Primary School, for Co. E.C. G. D. Taylor, architect, 27a English Street, Armagh—Building—A. A. Quinn, The Square, Tandragee, £11,150; heating and plumbing—J. W. Somerville, Scotch Street, Armagh, £1,240.
- Barnsley, Yorks.**—Erection of the first phase of a cog-rolling mill and billet-grinding plant at Grange Lane, Stafrfoot, for C. G. Carlisle and Co., Ltd.—Dyson and Co., 13 Alzewood Road, Sheffield, 8.
- Basildon, Essex.**—Erection of a factory for York Shipley, Ltd., North Circular Road, London, N.W.2. Ove Arup and Partners, consulting engineers, 8 Fitzroy Street, London, W.1—W. and C. French, Ltd., Buckhurst Hill, Essex. Work has commenced.
- Belfast.**—Erection of a new building to form a bookstack annex to the Central Public Library, Royal Avenue, for City Council. John Wright, surveyor, 2 Linen Hall Street, Belfast, 2. H. and J. Martin, Ltd., Ormeau Road, Belfast.
- Berkshire.**—Erection of a junior school at Marlow Road, Furze Platt, for E.C.—J. M. Jones and Sons, Hall's Gardens, Windsor Road, Maidenhead, £57,717.
- Birchington, Kent.**—Extension to staff house at Sourdeons Homes, Park Road, for the Trustees. Donald G. Robertson, architect, 3 and 4 Lincoln Inn Fields, London, W.C.1—Rice and Son, Ltd., Stockwell House, Cecil Square, Margate, £998.
- Bolton, Lancs.**—Erection of a shopping block with offices over at Victoria Square/Exchange Street for The Arndale Property Trust Ltd.—Leslie and Co., Ltd., 260 Swan Arcade, Bradford, 1. Gerald M. Baxter (staff architect) in association with Shingler and Risdon, 47 Bedford Row, London, W.C.1; R. G. McCaffrey, quantity surveyor, Ocean Chambers, Piccadilly, Bradford, 1; and F. R. Bullen and Partners, Dacre House, Dean Farrar Street, Westminster, London, S.W.1 are the consulting engineers.
- Booth, Lancs.**—Extensions to Civil Defence Headquarters, Knowsley Road, for B.C.—Direct Labour, £10,677.
- Bradford, Yorks.**—Following for City Council: Adaptation for conversion of Wyke Church School into clinic premises—Whitaker and Leach, Ashfield Road Works, Thornton, Bradford, £2,857; erection of 28 new study bedrooms on second floor of residential blocks, east and west wings of the Margaret McMillan Memorial Training College (phase IV)—Pickles Bros. (Builders), Ltd., Mile Thorn, Gibbet Street, Halifax, £13,961; internal painting work at Institute of Technology—D. E. Bagley and Co., Ltd., 111 Legrams Lane, Bradford, 7, £1,074; adaptation to provide additional lecture rooms at the Institute of Technology and the installation of a lift—Higgs and Hill, Ltd., 33 St. Paul's Street, Leeds, 1, £26,552; work in connection with extension of greasing plant to provide new paint shop at Hammerton Street depot—Thomas Obank and Sons, Ltd., Thackley, Idle, £4,176; internal painting of various schools—Drummond Road Secondary Modern Senior Junior and Infants including hutments and manual block, St. Patrick's R.C. Boys' Primary and Thorpe Edge Primary, Junior and Infants—Hudson and White, Ltd., Sawrey Place Works, Little Horton Lane, Bradford, £1,568, £550, £660, respectively; Clayton Secondary Modern (Boys' and Girls' Departments)—D. Bagley and Co., Ltd., £900.
- Erection of nursery school at Canterbury Avenue—W. J. Simms, Sons and Cooke, Ltd., Haydn Road, Sherwood, Notts., £18,641. All recommended.
- Burnley, Lancs.**—Provision of sterilising block and extensions to operating theatre unit at General Hospital for Manchester Regional Hospital Board—Mullen and
- Durkin, Ltd., 146 Trafalgar Street, Burnley, £21,366** (recommended, subject to Ministry approval).
- Carlisle, Cumb.**—Erection of television centre for Border Television, Ltd. E. M. Lawson, architect, Barras Buildings, Barras Bridge, Newcastle upon Tyne—Cussins (Contractors), Ltd., The Drive, Gosforth, Newcastle upon Tyne.
- Carnforth, Lancs.**—Erection of science laboratory at new Carnforth County Secondary School, for Co. E.C.—H. Dawson, Lightburne Park Works, Dragley Beck, Ulverston, £969.
- Cheltenham, Glos.**—Erection of the Cross Hands public-house at Tewkesbury Road for the Cheltenham and Hereford Breweries, Ltd.—Ford and Weston, Ltd., 34 Imperial Square, Cheltenham. Estimated cost £29,992.
- Cheltenham, Glos.**—Internal redecoration of the Town Hall for B.C.—Ford and Weston, Ltd., 34 Imperial Square, Cheltenham, £1,386 (recommended).
- Crewe, Ches.**—Reinstatement of medical superintendent's home at Cranage Hall, Holmes Chapel, for Manchester Regional Hospital Board—C. Potterton and Son, 16 Upton Avenue, Cheadle Hulme, £2,563 (recommended, subject to Ministry approval).
- Croydon, Surrey.**—Erection of four shops with maisonnettes over and four garages at 134-138 Upper Shirley Road, A. C. Bayley, architect, 2 Huntingfield, Addington—H. W. West and Sons, Ltd., 139 Shirley Road, Croydon.
- Exeter.**—Erection of a further block of six offices at Cattle Market and General building work (second stage) of the new Lower Market and Corn Exchange for City Council—R. L. Rendle, Ltd., £3,207; and Woodman and Son (Builders), Ltd., Haven Road, Exeter, £143,868 (recommended).
- Glasgow.**—Civil engineering work in connection with a new plate mill at Clydebridge Steelworks, Cambuslang, for Colvilles, Ltd., 195 West George Street, Glasgow—Murdoch Mackenzie, Ltd., Motherwell. Estimated cost £1m.
- Hastings, Sussex.**—Erection of new church hall at St. Clement's Church, Halton for Parochial Church Council. Norman A. E. Wyatt, architect, 2 Castle Hill Road—Proberts (Hastings), Ltd., Priory Road, £5,375. Work commenced.
- Kingston-upon-Thames, Surrey.**—Erection of six shops with offices above at the corner of Richmond and Cromwell Roads for Murrayfield Real Estate Co., J. Sevmour Harris and Partners, architects, 3-4 Greenfield Crescent, Five Ways, Birmingham, 15—James Miller and Partners, Ltd., Pump Lane, Haves, Middx.
- Leicester.**—Erection of an additional shop at Thurnby Lodge estate shopping centre for City Council—W. Potter (Contractors), Ltd., £3,101 (recommended).
- London.**—Erection of an office building at Ludgate Hill for the Colonial Mutual Life Assurance Society. Trehearne and Norman Preston and Partners, architects, 83 Kingsway, London, W.C.2—Trollope and Colls, Ltd., 1 Noble Street, E.C.2. Work commenced.
- Manchester.**—Following for Regional Hospital Board: Alterations to 829-831 Rochdale Road Harpurhey to provide accommodation for Beech Mount Maternity Hospital—J. Blackshaw and Sons, 41 West Wynford Street, Salford, £6,498; enclosing the link corridor to the main hospital and the provision of a visitors' waiting space in the new out-patients' X-ray and physiotherapy department at Victoria Memorial Jewish Hospital—G. W. Dawson and Co., Ltd., Harpurhey Road, Crumpsall, Manchester, 8, £3,991 (recommended, subject to Ministry approval).
- Mansfield, Notts.**—Redecoration of the auditorium and foyer at the Civic Hall for B.C.—Fosters, Ltd., Nottingham, £838 (recommended).
- Middlesbrough.**—Erection of eight-storey building comprising offices, conference suite, showrooms, etc., Borough Road—John T. Bell and Sons, Ltd., Market Street Chambers, Newcastle upon Tyne.
- Newbury, Berks.**—Conversion of the Old Rectory into four flats for B.C.—F. D. Carter and Partners, Ltd., Up Green Inkpen, Newbury, £2,292 (recommended).
- Newport, Mon.**—Extensions at Caerleon Training College for C.C. Sydney Leyshon, county architect—A. Arthur and Son, Ltd., Tabor Road, Maesycwmmer, Hengoed.
- North Shields, Northumb.**—Construction of new hailing station in the River Tyne for Lloyd's Register of Shipping—J. G. Thompson and Sons (Contractors), Ltd., Fowler Street, South Shields.
- Northumberland.**—Construction of sub-structure for the Forest Hall County Infant School for C.C. C. C. Brown, county architect—Cawood Wharton and Co., Ltd., Harrogate, £17,057.
- Northwich, Ches.**—Provision of casualty department at Victoria Infirmary for Manchester Regional Hospital Board—Exors. of S. Appleton, Northwich, £12,040 (recommended, subject to Ministry approval).
- Nuneaton, War.**—Erection of central library at Church Street for B.C.—G. E. and W. Wincott, Ltd., 64 Cotton Road, Nuneaton, £80,158 (recommended).
- Ormskirk, Lancs.**—Erection of R.C. schools in Chapel Lane, Burscough—J. and R. Woods, 15 Knowsley Road, Burscough, Ormskirk.
- Oxford.**—Completion of changing accommodation and cafe at Hinksey Pools for City Council—Symm and Co., Ltd., 43 Little Clarendon Street, Oxford, £28,223 (recommended, subject to Ministry approval).
- Port Erin, I. of M.**—Renewing the roof of the Herdman Institute for the Commissioners—Parkinsons, Ltd., Douglas, I. of M., £773.
- Prudhoe-on-Tyne, Northumb.**—Phase 3 development at Prudhoe and Monkton Hospital for Newcastle Regional Hospital Board: (a) Erection of villa for spastics, villa for epileptics and extension of nurses' home—John Twiname, Ltd., Cockermouth, £142,979; (b) erection of four children's villas, school, villa for psychotics, and two houses and external works—John Jackson and Sons, Newcastle, £283,288. Plans for (a) by P. H. Knighton, architect to the board; (b) S. W. Milburn and Partners, architects, 9 The Esplanade, Sunderland. Thos. Barrett, Sons and Partners, 33 High Bridge, Newcastle upon Tyne, 1, are the quantity surveyors for both projects.
- Rochester, Kent.**—Corn Exchange improvement scheme for City Council, comprising: (1) demolition and rebuilding of the old Corn Exchange; (2) construction of an extension to the library, consisting of a bookstore and new junior library; (3) installation of a new heating and lighting system; (4) general repairs, improvements and redecorations. J. A. Peel, city surveyor—H. Goodsell and Son, Ltd., 32 Sandring Road, Maidstone, Kent, £35,627. Work about to commence.
- St. Pancras.**—Erection of the new University College Dental Hospital at Mortimer Market, London, W.C.1—J. Jarvis and Sons, Ltd., 239 Vauxhall Bridge Road, London, S.W.1. Adams, Holden and Pearson, architects, 38 Gordon Square, W.C.1; R. Travers Morgan and Partners, consulting engineers, 60 Aldermanbury, E.C.2. Work commenced.
- Salford, Lancs.**—Extensions to medical records office at Hope Hospital, for Manchester Regional Hospital Board—J. Blackshaw and Sons, 41 West Wynford Street, Salford, 5, £2,339 (recommended, subject to Ministry approval).
- Skelmersdale, Lancs.**—Erection of branch library for U.D.C.—Bilow Contractors, Ltd., 18a Millgate, Wigan, £16,281.
- Southampton.**—Following for B.C.: Erection of heat treatment laboratory at the Technical College, Grove Street—Harrison and Rose, Ltd., Rowhams Lane, North Baddesley, Southampton, £2,057 (recommended); L. S. Tiffin, £2,161; G. E. Prince and Son, Ltd., £2,201; G. Carter and Sons, Ltd., £2,206; H. Stevens and Co., Ltd., £2,673; Lawrence Jones and Partners, Ltd., £2,679; John Lewis Building, Ltd., £2,720.
- Extending the steel-framed Coseley building for use as garage accommodation at Chapel Wharf Highways Depot—W. and R. Whittington, 38 Shirley Avenue, Southampton, £1,121; internal redecoration at King Edward VI School—R. H. and A. W. J. Hinton, Wetherall Deacon Crescent, Bitterne, Southampton, £6,433; erection of central waterwork depot—H. Stevens and Co., Ltd., Millbank Works, Millbank Street, Southampton, £105,681; rebuilding of the retaining wall along the east side of The Fosse, Bitterne Manor—Smith and Ray, 19 Dover Street, Southampton, £1,020 (recommended).
- Staffordshire.**—Construction of concrete block, brickwork and concrete walls between Tean River Bridge and Oakhill, trunk road A.50, at Upper Tean, for C.C.—Lansley Bros., 43 Werrington Road, Bucknall, Stoke-on-Trent. Work about to commence.
- Swansea.**—Adaptations to provide additional training accommodation at the Training College for B.C.—Direct Labour, £18,000.
- Swindon, Wilts.**—Erection of a pedestrian shopping precinct for Oddenino's Property and Investment Co. The scheme includes a six-storey office block, 28 shops, three supermarkets, a store, hotel and a two-storey car park. Shingler and Risdon, architects, 47 Bedford Square, London, W.C.1—Richard Costain, Ltd., 111 Westminster Bridge Road,

London, S.E.1 estimated cost £1m. Work commencing within two months.

Tipton, Staffs.—Converting the brick-built shelter at rear of public baths into dressing accommodation for B.C.—Harris Bros. (Builders), Ltd., Bagnall Street, Tipton, £863 (recommended).

Wakefield, Yorks.—Repainting of 194 houses at Crigglestone for R.D.C.—R. Kemp, Mirfield.

Walthamstow, Essex.—Following for B.C.: Erection of 105 garages in three courts at The Drive redevelopment scheme together with a children's playground—Direct Labour, £22,957; structural floors, etc., at 16-18 Prospect Hill—Brick Flooring Construction, Ltd., 14 Clifford Street, London, W.1, £3,630; supply and erection of a pre-fabricated building to serve as a community centre at The Grange—Vic Hallam, Ltd., Valley Works, Langley Mills, Notts., £899; offices and shops at Hoe Street redevelopment (stage II)—Whyatt (Builders), Ltd., 225 Streatham High Road, London, S.W.18, £135,037; conversion and repair of (a) 5 and 29 Addison Road, (b) 50 The Avenue, and (c) 48 Lynnmouth Road—(a) Chisnall Bros., 51 Queens Road, Loughton, £4,014, (b) and (c)—Direct Labour, £2,126 and £784 (all recommended).

Warminster, Wilts.—Alteration and decoration of the Water Board offices at 55 Boreham Road, contract 2 for West Wilts. Water Board—H. C. Bissex, Midsomer Norton, near Bath, £3,083 (accepted, subject to Ministry approval); Diamond Decorators, Ltd., £3,537; Wheeler and Dredge, £3,967; J. T. Parsons and Son, Ltd., £4,276; R. Butcher and Sons, £4,722; P. Hale, £4,878; T. Holdaway and Sons, Ltd., £5,098; W. J. Naylor, Ltd., £5,126; Wheeler and Co., £6,000. Work commencing Nov. 1.

DEMOLITION

Bradford, Yorks.—Demolition of following for City Council: Property bounded by Booth Street, Leeds Road, Peel Place and Hall Ings (block G) and to take down in tact all carved stone blocks in the Leeds Road and Peel Place frontages and deliver same and offload at the Shearbridge Road depot—W. W. Potter, 23 Shellbank Lane, Northoppe, Mirfield, £3,300; outbuildings at Browning Street School—Glenn Demolition, Bradford, £50 (both recommended).

Cheltenham, Glos.—Demolition of 6 and 8 Bath Parade for B.C.—W. H. Chambers, Uxbridge, Middx., £65 (recommended).

Chester.—Demolition of properties in the Newtown area and Oulton Place area for City Council—Engineers (Ruabon), Ltd., 45 King Street, Wrexham, £736 and £1,637 (recommended).

Exeter.—Demolition of air raid shelters at Trinity Green and Smythen Street for City Council—Wadsworth (Demolition and Excavation), Ltd., Sidmouth Road, Exeter, £120 and £155 (recommended).

Stoke-on-Trent, Staffs.—Demolition of Chatterley House Old Hall Street, Hanley, for City Council—Potteries Demolition Co., Ltd., 143 Etruria Street, Stoke-on-Trent, to pay to Council £20.

Walthamstow, Essex.—Demolition of 21 Hoe Street, 54 Browns Road, 2 Grosvenor Park Road, 1 and 3 Apsley Road, 37-49 Brandon Road and 88-94 Collard Road, for B.C.—A. R. Wright and Son, Ltd., 18a Coopers Lane, London, E.10, £1,132 (recommended).

ELECTRICAL

Bury, Lancs.—Provision of fire alarm system at General Hospital for Manchester Regional Hospital Board—Wade and Mills, Ltd., 195 Leeds Road, Oldham, £1,936 (recommended, subject to Ministry approval).

C.E.G.B.—The Central Electricity Generating Board have placed contracts during the past two months for power stations, transmission lines and transforming stations, amounting in the aggregate to approx. £13,642,000. The principal contracts include:

Festiniog pumped storage scheme—steel tunnel linings and penstocks protective coatings—E. and F. Richardson, Ltd.

Blyth B power station—construction of two reinforced concrete chimneys—The Mitchell Construction Co., Ltd.

Thorpe Marsh Power Station (near Doncaster)—66 kv., 2,500 MVA switchgear and ancillary equipment—Associated Electrical Industries, Ltd.; two reinforced concrete chimneys—Bierrum and Partners, Ltd.; floor slab and other floors and foundations—The Mitchell Construction Co., Ltd.

Aberthaw Power Station (near Barry, Glam.)—fire extinguishing equipment—G. N. Haden and Sons, Ltd.

Drakelow C Power Station (near Burton-on-Trent)—overhead electric travelling

cranes for turbine house—Herbert Morris, Ltd., structural steelwork—Peirson and Co., Ltd.

Rugeley Power Station—one 120,000 kW. turbo-generator, No. 3, feed-heating plant and dry cooling tower—The English Electric Co., Ltd.

Willington A Power Station (near Derby)—ash disposal pit and extension to pipelines—John Cochrane and Sons, Ltd.

Bankside B Power Station—h.p. pipework and valves—Stewarts and Lloyds, Ltd.; booster and boiler feed pumps—The Harland Engineering Co., Ltd.

Richborough Power Station—three cooling towers—Film Cooling Towers (1925), Ltd.; superstructure—Turiff Construction Corporation, Ltd.

Exeter Sub-station—one 180 MVA, 275/132 kV transformer—Hackbridge and Hewitt Electric Co., Ltd.

Taunton Sub-station—one 180 MVA, 275/132 kV transformer—Hackbridge and Hewitt Electric Co., Ltd.

Austin-Canons Sub-station—two 90 MVA, 132/33 kV transformers—Fuller Electric, Ltd.

Aylesbury Sub-station—two 90 MVA, 132/33 kV transformers—Hackbridge and Hewitt Electric Co., Ltd.

Hemel Hempstead Sub-station—two 90 MVA, 132/33 kV transformers—Fuller Electric, Ltd.

Barking Sub-station—four 75 MVA, 275/33 kV transformers—Associated Electrical Industries, Ltd.

Templeborough Sub-station—four 75 MVA, 275/132 kV transformers—Associated Electrical Industries, Ltd.

Watford Sub-station—one 60 MVA, 132/33 kV transformer—Crompton Parkinson, Ltd.

Barton Sub-station—one 60 MVA, 132 kV transformer and earthing transformer—Ferranti, Ltd.

Carrington "Local" Sub-station—one 45 MVA, 132/33 kV transformer and auxiliaries—Associated Electrical Industries, Ltd.

Fawley North Sub-station—two 45 MVA, 132/11 kV transformers and earthing transformers—C. A. Parsons and Co., Ltd.; extensions to 132 kV switchgear connections and protection—Associated Electrical Industries, Ltd.

Swansea North Sub-station—one 45 MVA, 132/33 kV transformer and earthing transformer—Fuller Electric, Ltd.; 132 kV outdoor switchgear—Associated Electrical Industries, Ltd.

Kirkby Sub-station—132 kV outdoor switchgear—Associated Electrical Industries, Ltd.

Oswestry Sub-station—132 kV, 3,500 MVA switchgear—Associated Electrical Industries, Ltd.

Kingston Sub-station—132 kV, 3,500 MVA switchgear—Associated Electrical Industries, Ltd.

High Marnham Sub-station—380/275 kV isolators and connections—Associated Electrical Industries, Ltd.

Monk Fryston-High Marnham—380 kV experimental line work—British Insulated Callender's Cables, Ltd.

Whitson Sub-station—275 kV overhead lines—Balfour Beatty and Co., Ltd.

Kirkby/Booth—cables—British Insulated Callender's Cables, Ltd.

Cheltenham, Glos.—Electrical installation in 38 dwellings at Maud's Elm for B.C.—M. B. Owen, 40 Marlborough Road, Gloucester, £1,298 (recommended).

Hartlepool, Dur.—Electrical installation in 56 houses being built by Direct Labour, for B.C.—John Westmorland and Co., Hartlepool, £2,092.

Nuneaton, War.—Installation and provision of lift in Lydgate Court flats for B.C.—A. R. Lane, Ltd., St. Patricks Road, Coventry, £3,215 (recommended).

Southampton.—Renewal of electrical installation at Springhill R.C. School for B.C.—G. Brough, £955 (recommended); H. C. Taplin and Sons, Ltd., £1,034; A. Buckett and Son, Ltd., £1,099; Sunderland Forge and Engineering, Ltd., £1,285; Dicks (Electrical Installations), Ltd., £1,295; F. H. Wheeler (Southern), Ltd., £1,380.

Walthamstow, Essex.—Electrical installation at 16-18 Prospect Hill for B.C.—Woodford Electrical Co., 56 High Street, Woodford Bridge, £1,623 (recommended).

FENCING

Newbury, Berks.—Erection of chain link fencing, schemes 7e and 7g at Bath Road estate for B.C.—James Edwards and Sons (Inkpen), Ltd., Inkpen, Sawmills, Newbury, £805 (recommended).

Ormskirk, Lancs.—Erection of wrought-iron fencing at the Maghull Deyes Lane County Secondary School for Co. E.C.—Raymond Sleight, Ltd., Pownall Street, Leigh, £1,249.

Stoke-on-Trent, Staffs.—Provision and erection of wrought-iron fencing along the boundary between the development on the Chorley Avenue, Fegg Hayes estate and the adjoining mineral railway line for City Council—Bayliss, Jones, Bayliss, Ltd., Wolverhampton, £2,322 (recommended).

Worcester.—Provision and replacement of fencing at Ronswood Primary School for City Council—Durafencing (Birmingham), Ltd., 34a Ulverley Green Road, Olton, Solihull, £462 (recommended).

GAS AND WATER SUPPLY

Belfast.—Water purification and filtration plant, pipework and ancillary equipment at proposed Grove Baths, York Road, for City Council. McCandless and Barton, consulting engineers, 6 Murray Street, Belfast, 1.—United Filters and Engineering, Ltd., Burston Road, Putney, London, S.W.15.

Doncaster, Yorks.—Erection of a pump house at Fittingly borehole No. 3 for B.C.—Direct Labour, £6,500 (recommended).

Maldon, Essex.—Supply and laying of approximately 1,506 yd. of 3 in. asbestos-cement water main, together with valves, hydrants, etc., for R.D.C.—G. J. Bardwell and Sons, Cold Norton, Chelmsford, £2,062 (accepted); A. C. and R. S. Mills, £2,188; Biggs Wall and Co., Ltd., £2,752; W. Donnellan, £3,387. Work to commence this month.

Romsey and Stockbridge, Hants.—Water supply schemes for Palestine and Mottisfont, for R.D.C. Lemon and Blizard, consulting engineers, Telford House, Hulse Road, Southampton—T. Carey and Son, Ltd., Station Buildings, East Finchley, London, N.2, £21,722 and £25,890, respectively. Work commencing shortly.

Southampton.—Supply of pumping plant for water supply to Gardeners Lane, Romsey, for B.C.—James Beresford and Son, Ltd., Birmingham, £984 (recommended).

South Cambridgeshire.—Construction, testing and maintenance of a pumping station, a 100,000-gallon reinforced concrete surface tank, and other works at Abington, contract 3 for R.D.C. Lemon and Blizard, consulting engineers, 59 Tufton Street, Westminster, London, S.W.1—Winton Hayes, Ltd., Boddington Works, Grove Road, Biggleswade, Beds., £10,015. Work commencing Nov. 1.

Williton, Som.—Clatworthy water supply scheme, contract 10, for R.D.C., including the construction of a 350,000-gallon capacity service reservoir in reinforced concrete at Grove Williton. S. E. Balch, engineer and surveyor—George Pollard and Co., Ltd., Wood Street, Taunton, £22,657.

HEATING AND VENTILATING

Bradford, Yorks.—Installation of a calorifier system for supply of domestic hot water at Semon Home for City Council—F. L. Sanderson and Son, Ltd., 36 City Road, Bradford, 8, £774 (recommended).

Kendal, Westmor.—Improvements to engineering services at Kendal Green Hospital for Manchester Regional Hospital Board—Saunders and Taylor, Ltd., 97 Chapel Street, Salford, 3, £16,105 (recommended, subject to Ministry approval).

Macclesfield, Ches.—Improvements to heating services (phase 1) at Parkside Hospital for Manchester Regional Hospital Board—Z. D. Berry and Sons, Ltd., 16-18 Regency Street, London, S.W.1, £19,668 (recommended, subject to Ministry approval).

Manchester.—Provision of three Economic type boilers for boilerhouse and plant at Fairfield General Hospital for Regional Hospital Board—D. Adamson and Co., Ltd., Dukinfield, Ches., £21,314 (recommended, subject to Ministry approval).

Mansfield, Notts.—Provision of ventilation in large swimming baths for B.C.—Williams and Williams, Ltd., 65 Wolstenholme Road, Sheffield, 7, £1,079 (recommended).

Sheffield.—Installation of heating and hot water system in second part of the Park Hill flats scheme for City Council—Brightside Heating and Engineering Co., Ltd., Ecclesfield, Sheffield, £11,321.

HOUSING SCHEMES

Bedale, Northumb.—(1) Site clearing and erection of seven bungalows and three houses; (2) road formation, Carthorpe redevelopment site, for R.D.C. Kenneth V. Shaw, architect, Oak House, Market Place, Bedale—(1) R. B. A. Moody (Northallerton), Ltd., £16,998; (2) R. Dodds and Sons, Melsomby, £1,089. Work commencing Oct. 18.

Beverley, Yorks.—Following for B.C.: 52 houses and 10 garages on Swinemoor housing estate—T. R. Barnett, Ltd., Curson

Street, Hull, £75,705; 10 houses with garages on St. Giles Croft site—Thos. Holmes and Sons (Contractors), Ltd., Sculcoates, Hull, £19,168 (both recommended, subject to Ministry approval).

Bradford, Yorks.—Sixty-four dwellings and 40 garages at Bradford Road, Clayton—M. Harrison and Co., (Leeds), Ltd., Post Hill Quarries, Farnley, Leeds, 12, £140,502 (recommended).

Cheltenham, Glos.—Twenty-eight additional dwellings at Maud's Elm, stage II, for B.C.—G. Wimpey and Co., Ltd., Hammer-smith Grove, London W.6 (recommended).

Cockermouth, Cumb.—Five houses at Bassen thwaite, for R.D.C.—Thomas Armstrong, Ltd., Cockermouth, £9,935.

Cookham, Berks.—Block of four flats adjoining Sawyers Crescent, Woodlands Park, White Waltham, for R.D.C. Alex Mandeville, engineer and surveyor—Veevers Bros., 7 Grubwood Lane, Cookham Dean, Berks., £6,356. Work about to commence.

Downham, Norfolk.—Following for R.D.C. Hughes and Bicknell, architects, Tunwells Court, Trumpington Street, Cambridge—Four bungalows at Market Lane, Crimple-sham—P. J. Boughen, Wimbotsham, £4,068 (accepted); Barker Bros., £4,603; O. Staines and Son, £4,673; H. W. Mobbs, £4,700; A. M. Covell, £4,719; M. J. Thompson (Fincham), Ltd., £4,828 F. Bennett, £5,576.

Four houses and 12 bungalows at Sluice Road, Denver—Barker Bros., Downham Market, £19,080 (accepted); P. J. Boughen, £18,761; Buckingham and Sparrow, £19,131; A. M. Covell, £20,136; M. J. Thompson (Fincham), Ltd., £20,935.

Ten bungalows at Lodge Road Feltwell—O. Staines and Son, Fincham, £10,912 (accepted); Barker Bros., £11,259; M. J. Thompson (Fincham), Ltd., £11,678; J. J. Bennett (Lakenheath), Ltd., £12,250; H. W. Mobbs, £12,565.

Six bungalows at Wretton Road, Stoke Ferry—H. W. Mobbs, Shouldham, £6,647 (accepted); O. Staines and Son, £6,759; Barker Bros., £6,953; A. M. Covell, £6,985; M. J. Thompson (Fincham), Ltd., £7,361.

Four bungalows at Queen's Close, Wereham—P. J. Boughen, £3,996 (accepted); Barker Bros., £4,552; O. Staines and Son, £4,482; H. W. Mobbs, £4,620; A. M. Covell, £4,699; M. J. Thompson (Fincham), Ltd., £4,701.

Hartlepool, Dur.—Thirty houses at Hart Station for B.C. John Wilkin, borough engineer—Atter and Davison, Northgate, Hartlepool, £56,470.

Houghton-le-Spring, Dur.—Following for U.D.C.: 30 old people's bungalows and six houses, Burnside estate and 32 aged persons' bungalows at Durham Street, Fencehouses—Direct Labour, £41,051 (for houses) and £10,888 (for site works and street lighting) and £43,329 (including site works), respectively.

Ilford, Essex.—Seventy-two flats and 39 garages at The Glade, stage II, for B.C.—Jenners (Builders), Ltd., High Road, Woodford Bridge, £147,786 (recommended).

Keighley, Yorks.—Ninety-three three-bedroom houses on the Hainworth Road estate for B.C. E. G. Felgate, borough architect—F. W. Heaton (Builders), Ltd., Crossflatts, Bingley.

Kirkcaldy, Fifes.—Following for B.C.: (1) Fifteen two-storey cottages and flats at Templehall Farm site; (2) eight single-storey cottages at Spey Avenue. James Gentry and Son, chartered quantity surveyors, Osborne House, East Fergus Place, Kirkcaldy—John Best (Contractors), Ltd., 13 Meldrum Road, Kirkcaldy, £25,890 and £11,998, respectively.

Maldstone, Berks.—Sixty-six houses and 12 garages at Cox Green estate, contract 5L, for B.C.—Clayton Heath, Ltd., Boyne Works, Boyne Hill, £109,487.

Newcastle upon Tyne.—Filling old mine workings in the Westgate Road area with concrete and grout pumped through boreholes under pressure, to prepare the land for the erection of multi-storey flats for City Council—Wimpey and Co., Ltd., Orchard House, Fenwick Terrace, Newcastle upon Tyne, £26,547.

Newton Aycliffe, Dur.—One hundred and thirty-two houses and 47 lock-up garages for Aycliffe Development Corporation. G. A. Goldstraw, chief architect—Direct Labour.

Liverpool.—Following for City Council: 24 dwellings at Kirkby consisting of two- and three-bedroom maisonnettes and one-bedroom flats at Kirkby Row—Unit Construction Co., Speke Boulevard, Speke, Liverpool, 24, £34,956; 89 dwellings, consisting of houses, flats and maisonnettes on four different sites, together with 77 garages and four shops. Six of the houses and 18 of the flats, as well as 48 garages, will be on Menlove Avenue—R. J. Barton and Sons, Altcar Road, Formby, £221,763. Six one-bedroom flats at Sybil Road, Walton—W. L. Murphy and Co., Guys Cliff, Kirkstone Road, North Liverpool, 21, £8,915.

Southampton.—Following for B.C. 136 flats at Maybush Triangle, contract B.344—G. T.

Crouch, Ltd., Kingston-upon-Thames, £255,376; three blocks of five-storey flats (33 No-fines) at section 4, Thornhill estate contract B.352—G. Wimpey and Co., Ltd., London, W.6, £59,853 (recommended, subject to Ministry approval).

Stoke-on-Trent, Staffs.—Fifty-two dwellings (group I) at Longton Hall Road, Longton site, for City Council—Direct Labour, £75,590 (recommended, subject to Ministry approval).

Tipton, Staffs.—Ninety flats in three six-storey blocks, including ancillary buildings and external works at Groveland Road site, for B.C.—Wates, Ltd., 1258 London Road, London, S.W.16, £222,923 (recommended, subject to Ministry approval).

Tynemouth, Northumb.—Two blocks of 44 dwellings, four storeys high, under stage 3 of the East End redevelopment scheme, North Shields, for B.C. D. M. O'herlihy, borough engineer—Wimpey and Co., Ltd., Orchard House, Fenwick Terrace, Newcastle upon Tyne, £82,044.

Wick, Caithness.—Willowbank housing, 16th development (92 houses) for B.C. Jenkins and Marr, architects, 3 Bon-Accord Crescent, Aberdeen—Kenneth Macrae and Co., Ltd., The Shore, Wick, £171,298 (accepted); D. M. Geddes and Sons, £189,255; Alexander Sutherland, Ltd., £195,256; A. A. Stewart and Sons, £198,274.

MATERIALS AND SUPPLIES

Huddersfield, Yorks.—Supply of 80,000 cu. yd. of dry slag filter media for B.C.—Stanton Ironworks Co., Ltd., Ilkerton, Derbys.

PLANT AND MECHANICAL TRANSPORT

Newcastle upon Tyne.—Supply of two vehicles suitable for the Council's school meals service for City Council—Minories Garage, Ltd., Newcastle upon Tyne, £1,463.

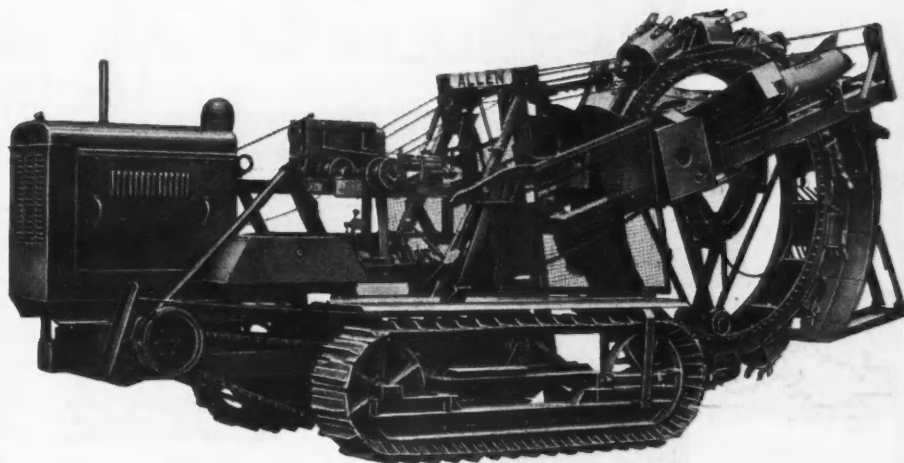
Orrell, Lancs.—Supply of a dustless loader for U.D.C.—John Gibson and Co., Ltd., Edinburgh, £3,482.

Southampton.—Supply of a 10/12-ton diesel roller for B.C.—Aveling-Barford, Ltd., Grantham, Lincs., £3,182 (recommended).

Tipton, Staffs.—Supply of a Chaseside loading shovel for B.C.—R. Tildesley, Ltd., Willenhall, £1,892 (recommended).

Walthamstow, Essex.—Supply of two Karrier Gamecock tipping lorries and one Simon hydraulic lifting platform mounted on a Dennis chassis for B.C.—Reliance Motors

ALLEN WHEEL TRENCHER MODEL 140



"FAST" TRENCHING

Combining speed of digging with dependability, the "140" has a range of traction speeds from .5 to 37.3 ft. per minute, and will cut clean, fast trenches, 17½ in. to 30 in. wide, to a maximum depth of 5 ft. 6 in.

16 in. smooth crawler tracks, with cleats, give a ground pressure of only 5.7 lbs. per sq. in.

Full details from U.K. manufacturers and distributors:

JOHN ALLEN & SONS (OXFORD) LTD., Cowley, Oxford



(Chingford), Ltd., Hall Lane, London, E.4. £2,610, and Dennis Bros., Ltd., Guildford, Surrey, £4,190, respectively (recommended).

PLAYING FIELDS, PARKS, ETC.

Bradford, Yorks.—Construction of a bowling green and three hard tennis courts at Brackenhill Park for City Council—En-Tout-Cas Co., Ltd., Syston, Leicester, £1,531 and £1,498, respectively (recommended).

Lancashire.—Development of playing fields at Our Lady's R.C. Secondary School to be built at Acrelands, Skerton, for Co. E.C.—C. A. Widding and Co., Ltd., £2,208.

Nuneaton, War.—Preparation of playing field for B.C.—J. W. Chorley, Ltd., Witherley, Atherstone, £1,100 (recommended).

Worcester.—Spreading soil and levelling at Diglis recreation ground for City Council—W. F. Eden, Worcester, £625 (recommended).

RAILWAY ENGINEERING

British Railways.—Following contracts placed: North-Eastern Region:

Partitioning of the diesel shop at North Road Locomotive Works, Darlington—Handy Angle, Ltd., Grand Buildings, Trafalgar Square, London, W.C.2.

Removal of the platforms and station buildings at Blackhall Rocks—A. Blair, Ltd., 28 Southend Avenue, Darlington.

Installation of foundations for hydraulic buffer stops on platforms 4 and 5, and for the provision of drainage and water supplies at Bradford Exchange Station—The Brighouse Estate Co. (Builders), Ltd., Fagley Lane, Bradford, 2.

Site works required in the part reconstruction of bridge 7 at Armley Moor on Leeds-Bradford line—Ruddock and Meighan, Ltd., Barugh Green, Barnsley.

Provision of a heating installation in the parcels office at Newcastle Central Station and in the offices at Irving House, Westgate Road, Newcastle—The Brightside Heating and Engineering Co., Ltd., Lambton House, Lambton Road, Newcastle upon Tyne, 2.

Marshalling yard at Newport—A. Robinson (Contractors), Ltd., 423 Linthorpe Road, Middlesbrough.

Scottish Region:

Diesel fuelling and maintenance facilities, Eastfield motive power depot, Glasgow—Jas. Campbell and Son, Inverness.

Road repairs, Corstorphine goods yard—A. and J. Faill, Ltd., Glasgow.

Two rail planing machines, Kilmarnock permanent way workshops—Butler Machine Tool Co., Ltd., Halifax.

Reconstruction of underbridges 1 and 10, Saughton Road North, Edinburgh—James Miller and Partners, Ltd., Edinburgh.

Two diesel-driven two-ton fork lift trucks for goods stations in Scotland—Conveyancer Fork Trucks, Ltd., Warrington.

Infilling of arch voids, viaduct 104 Kilmarnock—Kinnear, Moodie and Co., Ltd., Glasgow.

Heavy duty wheel lathe, Townhill wagon repair depot, Dunfermline—Scottish Machine Tool Corporation, Ltd., Johnstone.

Maintenance work, underbridge 214, Golspie—The Cementation Co., Ltd., Glasgow.

Prestressed concrete beams and precast concrete units for 11 underbridges—Costain Concrete Co., Ltd., Newmans.

Grading of hump areas Millerhill new marshalling yard, Edinburgh—James Miller and Partners, Ltd., Edinburgh.

Southern Region:

Wimbledon Station: repairs to roofs—Macartney and Sons, London, S.W.9.

New Cross Gate-Deptford Wharf: aerial survey—Fairley Air Surveys, Ltd., near Maidenhead, Berks.

Kingston Station: repairs to roofs—Durable Asphalt Co., Ltd., London, N.1.

Waterloo Station: repairs to roofs—Durable Asphalt Co., London, N.1.

Greenwich Royal Hill: removal of bridge and reinstatement of highway—Harry Neal, Ltd., London, W.1.

Hurst Green New Station: construction of new station buildings, platform roofing and ancillary works—Truett and Steel, Ltd., Thornton Heath, Surrey.

Western Region:

Setting out, supply and installation of signalling control and train describer panels at signal box, Port Talbot—Henry Williams, Ltd., Tolpits Lane, Watford, Herts.

Setting out, supply and installation of signalling control panels at East Usk, Newport West, Maindee Main, Maindee North, Gaer Junction and Ebbw Junction signal boxes, Newport—Henry Williams, Ltd., Tolpits Lane, Watford, Herts.

Setting out, supply and installation of signalling control and train describer panels at Twyford signal box—Henry Williams, Ltd., Tolpits Lane, Watford, Herts.

Setting out, supply and installation of signalling control and train describer panels

at signal box Newport East—Henry Williams, Ltd., Tolpits Lane, Watford, Herts.

Supply, installation, testing, connecting and setting to work of electric lighting facilities at Paignton Station—Burdette and Co., Ltd., Clapham Manor Street, London, S.W.4.

Provision of additional accommodation in connection with the fuelling facilities for diesel railcars at Tyseley—Jenks Builders, Ltd., Stafford Street, Wolverhampton.

Renewal of the roof covering and vertical glazing to the lifting shop at Running and Maintenance Depot, Tyseley—J. Rata and Co., Ltd., Chapter Road, London, N.W.2.

Supply and installation of three gas-fired furnaces at Q shop, locomotive works, Swindon—Lucas Furnaces, Ltd., Wharton Street, Nechells, Birmingham, 7.

Supply, installation, testing, connecting and setting to work of electric lighting facilities, etc., at Oldbury and Langley Green Station—The Midland Electric Installation Co., Ltd., Cyprus Works, Upper Villers Street, Wolverhampton.

Supply, erection and commissioning of a standby supply generating set and transformer in the signal relay room at Reading—Pelapone, Ltd., Derby.

Supply, erection and commissioning of a standby supply generating set and transformers in the signal relay room at Maidenhead—Pelapone, Ltd., Derby.

Supply, erection and commissioning of a standby supply generating set and transformers in the signal relay room at West Drayton—Pelapone, Ltd., Derby.

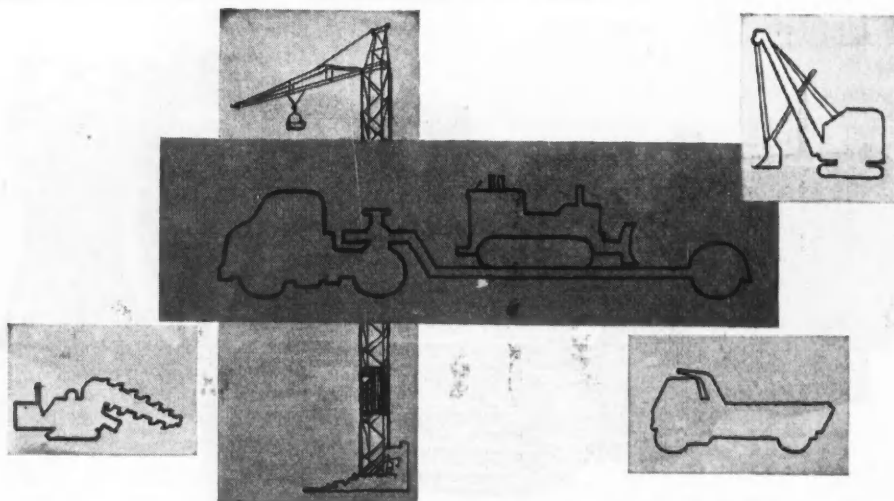
Supply, installation, testing, connecting and setting to work of electric lighting facilities, etc., at Newton Abbot Station and area—James Scott and Co. (Electrical Engineers), Ltd., Grosvenor Place, S.W.1.

Supply, erection and commissioning of a standby supply generating set and transformers in the signal box, Port Talbot—National Gas and Oil Engine Co., Ltd., Ashton-under-Lyne, Lancs.

Renovation of the booking hall and inquiry office at Bristol (Temple Meads) Station—Stone and Co. (Bristol), Ltd., Redland Road, Bristol, 6.

Conversion of the existing running and maintenance depot for diesel locomotives at Bristol (Bath Road)—Kyle, Stewart (Contractors), Ltd., Ardshiel House, Empire Way, Wembley, Middx.

Supply and erection of two portable rail movers at Shrewsbury (Hookgate) rail welding depot—Jesshope, Ltd., Longport, Stoke-on-Trent.



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ROADS, BRIDGES AND SITE WORKS

Banffshire.—Construction of a by-pass, approximately 700yd. long, through Duff House grounds for C.C.—John McAdam and Sons, Ltd., Muggie Moss Road, Woodside, Aberdeen, £44,972 (accepted); William Briggs and Sons, Ltd., £46,875; Dreit Construction Co., Ltd., £49,611; William Tawse, Ltd., £52,543; Donald C. Stewart, £55,989; Sportworks, Ltd., £57,861; James Leith, Junr., Ltd., £67,543; Lewis Middleton, Ltd., £114,788.

Bradford.—Following works for City Council: Kerbing and resurfacing the roadway at Beechwood—Ibmac, Ltd., Shipley, £1,593; site preparations, construction of carriageways and footpaths and laying of sewers and drains at Bradford Road housing estate—Direct Labour, estimated cost £8,846; re-making of access road at Hanson School canteen—Pavior Construction Co., Ltd., Shipley, £908 (recommended).

Caterham and Warlingham, Surrey.—Making-up of Crewes Avenue, Warlingham, for U.D.C. L. V. Gordon, engineer—Sparkes (Construction), Ltd., £3,687 (recommended); Farnborough Engineering and Construction Co., £4,022; W. H. Gaze and Son, £4,001; Mears Bros., £3,760; H. V. Smith and Co., Ltd., £4,695; John Sugrue and Sons, £4,613; Surface Maintenance Services Ltd., £4,104; Waywards, Ltd., £4,726.

Chertsey, Surrey.—Making-up of eight private streets on the Bois Hall estate, Addlestone, for U.D.C. N. C. Goldsmith, engineer and surveyor—W. H. Gaze and Sons, Ltd., 139 Roehampton Vale, London, S.W.15, £8,320.

Chester.—Preliminary road and sewer works at Highfield Road housing site for City Council Percy Bilton, Ltd., Newcastle Road, Stone, Staffs., £6,824 (recommended).

Chipping Norton, Oxon.—Laying approximately 2,000yd. of 3in. and 4in. pressure asbestos water mains at Salford, near Chipping Norton, for R.D.C.—Woodlands (Worcestershire), Ltd., Evesham, £3,066 (provisionally accepted).

Cockermouth, Cumb.—Construction of roads and sewers to serve 24 houses at Dearham for R.D.C.—Eden Construction Co., English Damside, Carlisle, £4,819.

Crawley, Sussex.—First stage of site works for Furnace Green, comprising extensions of Furnace Drive and Ashdown Drive, Til-

gate, for Development Corporation—Highways Construction, Ltd., Iddesleigh House, Caxton Street, London, S.W.1, £63,384.

Derbyshire.—Levelling, paving, kerbing, draining and surfacing of Netherfield Road, Chapel-en-le-Frith, for C.C.—T. J. Murphy, Ltd., 113 Radcliffe New Road, Whitecliffe, near Manchester, £4,408.

Exeter.—Following for City Council: Construction of a service road off Palace Gate and resurfacing of Cathedral Yard and paving of the Piazza—Kings Asphalt, Ltd., 10 Bedford Street, Exeter, £1,847 and £1,953, respectively; surfacing of Prince of Wales Road and Middlemoor Roundabout and Magdalen Road—Western Quarry Sales, Ltd., St. Stephens House, High Street, Exeter, £942 and £2,567, respectively; completion of paving at South Street (stage II)—King's Asphalt, Ltd., £5,319 (recommended).

Hampshire.—Improvements to eastbound carriageway of trunk road, A.30, east of Hatch for C.C.—Surface Maintenance Services, Ltd., Durham House, 124 Old Christchurch Road, Bournemouth, £13,993.

Harwich, Essex.—Making-up of Wick Lane for B.C.—Roadworks (1952), Ltd., 57-61 Commercial Road, Ipswich, £6,316 (recommended).

Inverness-shire.—Improvement of the Tarbert Rodel road (A.859) for C.C.—William Tawse, Ltd., Carse, Inverness. Estimated cost £150,000.

Isle of Wight.—Proposed highway improvement at Blackwater Junction, Blackwater, near Newport, for C.C., including construction in lean-mix concrete and bituminous macadam of approximately 700 lin. yd. of carriageway not less than 22ft. wide, together with surface water drainage, fencing and other ancillary works—Cheek Bros., 1 Churchlitten, Newport, I. of W., £21,762.

Kincardineshire.—Improvement and diversion of the Brechin-Laurencekirk-Stonehaven road, A.94, from Fiddes to Clochnahill, for C.C.—William Briggs and Sons, Ltd., East Camperdown Street, Dundee, £37,547.

Leicester.—Widening of Checketts Road for City Council—Stimpson and Rollston, Ltd., West Avenue, Wigston, Leicester, £19,281 (recommended, subject to M.T. approval).

Llanelli, Carmar.—Advanced preparation work of the housing site near Noddfa Chapel,

Trimsaran, for R.D.C.—J. H. Williams, 1 The Cliffe, Burry Port, Llanelli, £5,057 (accepted); Cambrian Construction Co., Ltd., £9,307; Kirkhouse Asphalt Co., £6,872; Woodland Development Agency, Ltd., £7,341; Isaac Jones (Llanelli), Ltd., £5,398; T. Gallagher and Son, Ltd., £6,314; Arnold Engineering Construction Co., Ltd., £6,487. Work to commence this month.

Maidenhead, Berks.—Following at Cox Green estate for B.C.: Surfacing of carriageways, section I—Constable Hart and Co., Ltd., Lion House, Red Lion Street, Richmond, Surrey, £5,445; footway works, stage I, section II—Charles Prior and Son, 153 Ashford Road, Bucks., £3,808 (recommended, subject to Ministry approval).

Mansfield, Notts.—Construction of roads and sewers, etc., at Gas Hill and Crow Hill, Pleasley Hill, for B.C.—Direct Labour, £4,050 (recommended).

Newbury, Berks.—Construction of footpaths and ancillary works on part III of Bath Road estate for B.C.—Sportworks, Ltd., Reading, £4,618.

Newcastle upon Tyne.—Reconstruction and widening of Fawdon Lane from the city boundary to Fawdon Park Road for City Council. D. T. Bradshaw, city engineer—Direct Labour, £22,870.

Norwich.—Construction of a footpath and surface water sewer in Plumstead Road East and widening of Riverside Road from its junction with Bishop Bridge Road for City Council—Direct Labour (recommended). Estimated cost £9,900 and £9,910, respectively.

Nuneaton, War.—Draining and paving of garage sites for B.C.—Judkins (Coated Macadam), Ltd., Tuttle Hill, Nuneaton, £7,267 (recommended).

Rawtenstall, Lancs.—Construction of a new access road to Rossendale General Hospital for B.C.—James Brearley and Sons, Ltd., Yorkshire Street Mill, Bacup, £8,755 (recommended).

Sandbach, Ches.—Making-up Sweettooth Lane (part) for U.D.C.—R. Beech (Contractors), Ltd., £1,708 (recommended).

Sandown-Shanklin, I. of W.—Reconstruction and making-up of part of Brook Road, Shanklin, including kerbing, excavation, ballasting and surfacing of the carriageway and footpaths and other incidental works, for U.D.C. T. Josey, surveyor—W. G.

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Elliott, Merryale, Godshill, I. of W., £967 (accepted); Cheek Bros., £1,816.

Southampton.—Making-up of (a) Montague Avenue (part), (b) Harlyn Road (part), Paignton Road (part) and Trearnan Close, and (c) Oak Close, for B.C.—Wessex Road Construction Co., Ltd., Heathfield Farm, Catisfield, Fareham, (a) £2,709, (b) £3,541 and (c) £1,299 (recommended, subject to Ministry approval).

South Shields, Dur.—Construction of traffic roundabout at the junction of Prince Edward Road and Harton Lane for B.C. John Reid, borough engineer—Direct Labour, £9,500.

Staffordshire.—Making-up of Brookfield Avenue, Endon (length 213yd.) for C.C. The work includes excavation, providing two layers of 2in. broken stone to 6in. depth laid on 3in. ashes, and surfacing of 3in. bituminous macadam, precast concrete kerbs and channels, footpaths of bituminous macadam and cold asphalt, and the provision of stoneware surface water drains with brick manholes—F. J. Williams and Sons (Bucknall), Ltd., Werrington Road, Bucknall, Stoke-on-Trent.

Stoke-on-Trent, Staffs.—Following for City Council: Completion of street works on (a) Penkhull New Road, Pennkhill estate, (b) Berry Hill estate (contract 2) and (c) Warren Road, Chell Heath and (d) improvement and widening of Hamil Road along the Burslem Park frontage—Roy Beech (Contractors), Ltd., 9 Brook Street, Stoke-on-Trent, (a) £4,338, (b) £6,744, (c) £1,876 and (d) £4,656 (recommended).

Repairs to Gleebe Street Canal Bridge, Stoke, and parapet walls of Sutherland Road Bridge, Longton—Leonard Fairclough, Ltd., Newcastle-under-Lyme (recommended). Estimated cost £4,500 and £1,600, respectively.

Tipton, Staffs.—Site levelling and construction of estate roads and sewers on south-west section of Groveland Road site for B.C.—Wrekin Construction Co., Ltd., £3,238 (recommended, subject to Ministry approval).

Tynemouth, Northumb.—Extension to the Coast Road between Billy Mill and the Broadway for B.C. D. M. O'herlihy, borough engineer—G. Wimpey and Co., Ltd., Orchard House, Fenwick Terrace, Newcastle upon Tyne, £176,355.

Walthamstow, Essex.—Construction of roads and sewers at Outwood Common (northern section) for B.C.—Hadsphatic Construction Co., Ltd., Ibex House, Minorities, London, E.C.3, £5,521 (recommended).

West Riding.—Improvement of the London-Thurso trunk road by the construction of the Aberford By-pass in the Tadcaster rural district for C.C.—Dowsett Engineering Construction, Ltd., Dowsett House, Durham Road, Newcastle upon Tyne, 9.

Worcester.—Resurfacing the playgrounds at the Royal Grammar, Gorse Hill Infants', Samuel Southall Secondary and St. Clement's Primary Schools for City Council—N. W. Dunn and Co., Ltd., Coronation House, Church Street, Bromsgrove, £1,221 (recommended).

SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Bradfield, Berks.—Improvements to Beenham drainage scheme for R.D.C.—Blakes (Beenham), Ltd., Bath Road, Padworth, £17,100 (subject to Ministry approval).

Bradford.—Extensions to sludge lagoon at North Bierley sewage disposal works for City Council—Wright Bros. (Clayton), Ltd., Victoria Works, Clayton, Bradford, £1,139 (recommended).

Exeter.—Piping of a portion of stream at Sweetbrier Lane for City Council—W. J. Clemens and Co. (Contractors), Budleigh Salterton, £19,277 (recommended).

Fareham, Hants.—Construction of town main drainage relief sewers for U.D.C.—Surface Maintenance Services, Ltd., Durham House, 124 Old Christchurch Road, Bournemouth, £157,069.

Hatfield, Herts.—Construction of approximately 3,600 lin. yd. of 6in. diameter glazed stoneware flexible jointed sewers, 41 concrete manholes and 850 lin. yd. of 4in. diameter drain connections to 64 properties at Bell Bar for R.D.C.—A. V. Wootton and Co., 76 Trinity Road, Wood Green, London, N.22, £12,108.

Leicester.—Construction of storm water sewers at Hinckley Road, Friday Street and Aylestone Road for City Council—Direct Labour (recommended). Estimated cost £35,000, £6,665 and £2,720, respectively.

Mildenhall, Suffolk.—Mildenhall sewerage scheme for R.D.C. J. H. Haiste and Partners, consulting engineers, Belmont House, 20 Wood Lane, Headingley, Leeds, 6—Contract 1—construction of approximately eight miles of 6in., 9in. and 12in. diameter concrete pipe sewers, manholes, three pumping stations and sewage disposal works at Mildenhall—H. O. Andrews, Ltd., Leeds, 8, £143,575 (accepted); Sam Booth, Ltd., £158,210; F. W. Shanks, Ltd.,

£158,573; T. C. Stewart, Ltd., £161,510; Derek Crouch, Ltd., £189,817; Biggs, Wall and Co., Ltd., £195,049; K. B. Benfield and Co., Ltd., £28,987.

Contract 2—supply and erection at Mildenhall of two 450 gallons per minute crude screened sewage pumps; two 600 gallons per minute crude screened sewage pumps; two 125 gallons per minute crude screened sewage pumps; two 100 gallons per minute sludge and supernatant water pumps, all complete with electric motors, starters and accessories—Adams-Hydraulics, Ltd., York, £8,854 (accepted); Gwynnes Pumps, Ltd., £7,786; Tuke and Bell, Ltd., £8,324; Hughes and Lancaster, Ltd., £8,893; Berry Hill Engineers, Ltd., £10,572; Drysdale and Co., Ltd., £12,286.

Newbury, Berks.—Construction of following, for B.C.: Lower Way Lane pumping station and rising main—Lee and Son, Burchetts Green, Maidenhead, £12,882; sewage Effluent pumping station and rising main—Mexfield Building Co., Ltd., £11,174 (recommended).

Newcastle upon Tyne.—Culverting of stream at Craghall Dene involving the laying of 160yd. of 48in. culvert for City Council. D. T. Bradshaw, city engineer—Direct Labour, £4,575.

Norwich.—Connection of St. Stephen's Street and Mile Cross Road sewers to the north-western intercepting sewer for City Council—Direct Labour (recommended). Estimated cost £2,300.

Wantage, Berks.—Reconstruction of sewers in Newbury Street, Wallingford Street, Little Lane and the Market Place for U.D.C.—Hinkins and Frewin, Ltd., Canal Street, Oxford, £37,446.

STREET LIGHTING

Cheadle and Gatley, Ches.—Supply and erection of 39 group A prestressed spun concrete lighting columns, together with 140-W sodium lamps and lanterns in Manchester Road, for U.D.C. D. S. Graham, engineer and surveyor—Cohen Bros. (Electrica) Ltd., Bury Old Road, Manchester, 8. Work to commence December.

Longbenton, Northumb.—Further stage of the Council's programme for converting street lighting from gas to electricity. Work includes the supply and erection of 133 sodium vapour lighting units on main roads and 21 100-W filament lighting units on other roads, for U.D.C.—Engineering and Lighting Equipment Co., Ltd., Sphere Works, St. Albans, Herts.

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Maidenhead, Berks.—Street lighting (stage II) at Shoppenhangers Road for B.C.—Erecon, Ltd., Amwell, Ware, Herts., £2,270 (recommended, subject to M.T. approval).

Oadby, Leics.—Supply and erection of 31 group B lighting units on Leicester Road and London Road for U.D.C. The columns are to be aluminium with 60-W. sodium lanterns and gear. E. H. Sandiford, engineer and surveyor—Midland Lighting and Building, Ltd., 167 London Road, Leicester, £1,195 (accepted); A.E.I. Lamp and Lighting Co., Ltd., £1,255; Phosco, Ltd., £1,269; A. C. Ford, Ltd., £1,319; Revo Electric, Ltd., £1,423.

Watford, Herts.—Supply, erection and wiring complete of 93 concrete columns on the north orbital road A.405 for B.C.—Midland Lighting and Building Ltd., 167 London Road, Leicester, £3,613.

GOVERNMENT CONTRACTS

Admiralty.—Particulars of contracts over £4,000 in value, placed by Navy Works Department:

Pembrokeshire: Painting—Ian Williams and Co., Ltd., Cardiff.

Kent: Extension to building—Wright (Sittingbourne), Ltd., Sittingbourne; sheet piling—J. W. Ellingham, Ltd., Maidstone; reconstruction of roads, paths and railtrack—Bensted Contractors, Ltd., Maidstone.

Co. Durham: Renewal of timber decking—Eagre Construction Co., Ltd., Scunthorpe. Essex: Cable ducts, pit foundations, huts, etc.—J. Murphy and Son, Ltd., London, N.4.

Air Ministry.—Contracts to the value of £4,000 or over for the week ended Sept. 23:

Building work: Coningsby, Lincs.—J. T. Barber and Son, 40 Hesse Avenue, Boston, Lincs.; Alconbury, Hunts—C. Miskin and Sons, Ltd., Romeland, St. Albans, Herts.; Honington, Suffolk—A. Monk and Co., Ltd., P.O. Box 4, Stamford, Lincs.; Northwood, Middx.—W. H. Streeter, Ltd., 10 Tudor Road, Hampton, Middx.

Surfacing existing paved areas: Thorney Island, Hants—Constable Hart and Co., Ltd., Lower Drayton Lane, Cosham, Portsmouth, Hants.

Surfacing existing taxiways: Ballykelly, Northern Ireland—Constable Hart and Co., Ltd., Lion House, Richmond, Surrey.

Artificers' work: Bawtry, Yorks., etc.—G. G. Middleton and Sons, Ltd., 32 Gateford Road, Workson, Notts.; Old Sarum, Wilts., etc.—Willcocks and Stephens, Ltd., Lower Polsham Road, Paignton, Devon; Bishops Court, County Down, Northern Ire-

land, etc.—F. Parkinson, Ltd., Mowbray Drive, Blackpool, Lancs.; Gaydon, Warwicks., and Ternhill (Salop), etc.—Lewis and Watters, Ltd., Lime Avenue, Lillington, Leamington Spa, Warwicks.; Hendon (London), Northwood (Middx.), etc.—Haymills (Contractors), Ltd., Empire House, Hanger Green, Western Avenue, London, W.5.

Provision of new buildings, concrete foundations, etc.: Horham, Suffolk—Haymills (Contractors), Ltd., Empire House, Hanger Green, Western Avenue, London, W.5.

Provision of concrete foundations for steel towers: North Luffenham, Rutland, etc.—A. J. G. Potter and Sons, Ltd., High Street, Stanwick, Wellesborough, Northants.

Electrical installations (internal): Scampton, Lincs.—Williams Bros. (Electrical), Ltd., 32a Temple Street, Wolverhampton.

Ministry of Finance, Northern Ireland.—Contracts exceeding £250 in value placed during the period Sept. 5 to Sept. 16:

Construction and completion: Head Post Office, High Street, Omagh—J. A. Gamble, Dock Street, Strabane.

Supply, etc., specialist concrete work, Pig Progeny Testing Station: Greenmount Agricultural College, Muckamore—Dow-Mac (Products), Ltd., Warrenpoint, Newry.

Low pressure hot water heating, etc.: Ministry of Labour Local Office, Bishop Street, Londonderry—Johnston Bros., Main Street, Hillsborough.

Supply, etc., paving slabs: Ministry of Commerce Factories, Carnmoney—J. McQuillan, Ltd., Glenside Quarries, Hannahstown, Dunmurry.

Supply, etc., wire mesh screens: Petty Sessions Court and County Courthouse, Belfast—J. Rogers, Ltd., 68 Victoria Street, Belfast, I.

Supply, etc., wood block flooring: Telephone Exchange, Dawson Street, Armagh—Vigers Bros., Ltd., Broadway Chambers, Ludgate Broadway, London, E.C.4.

Electrical installation, hostel: Loughry Agricultural College, Cookstown—T. Clarke, 31 Franklin Street, Belfast, 2.

Low pressure hot water heating, etc.: Post Office, Ballymoney—R. Finlay, Whitehouse, Belfast.

Ministry of Works.—Contracts placed for week ended Sept. 17:

Cheshire: Roman Amphitheatre, Chester—erection of concrete and brick boundary walls—Thomas Warrington and Sons, Ltd., 82 Station Road, Ellesmere Port, Cheshire.

Essex: Buckhurst Telephone Exchange extension—erection—Charles S. Foster and

Sons, Ltd., 9-17 High Beech Road, Loughton, Essex.

Lanarkshire: Post Office Engineering Depot, Shields Road, Motherwell—erection—A. A. Stuart and Sons, Ltd., 2275 London Road, Carmyle, Glasgow, E.2.

London: Belgravia B.P.O., 4-5 Chester Mews, S.W.1—completion—E. J. Lacy and Co., Ltd., Steele Road, N.W.10; Whitehall Offices, S.W.1—erection of passenger lift—Keighley Lifts, Ltd., Yorkshire.

Somerset: Head Post Office, Shepton Mallet—alterations—Stone and Co. (Bristol), Ltd., Redland Road, Bristol, 6.

Post Office.—Contracts for duct laying, etc., works to the value of £4,000 and over placed during the two weeks ended Sept. 24:

Alec Astbury (Builders and Contractors), Ltd., Allyn Drive, Penyffordd, Chester; Hugh Brown (Engineers), Ltd., Chart Road, Ashford, Kent; C.D.L. Construction Co., Ltd., Church Road, Egham, Surrey; Christie and Co. (Contractors), Ltd., Raemoir Road, Banchory, Kincardines; George H. Graham (Contractors), Ltd., District Bank Chambers, Market Street, Huddersfield, Yorks.; E. W. Moulson and Sons, Ltd., Forrester's Yard, High Street, Wibsey, Bradford, Yorks.; J. Murphy and Sons, Ltd., 43 Charteris Road, Finsbury Park, London, N.4; The North Midland Construction Co., Ltd., Portland Works, Daybrook, Nottingham; The Northwest Construction Co., Ltd., Litherland, Liverpool, 21; Robert Paterson and Sons, Ltd., Milton Street, Airdrie, Lanarks.; Stanley Raymond and Co., Ltd., Sussex Road, Southall, Middx.; Douglas Shields, Ltd., 1 Carlin Gate, Blackpool, N.S. Lancs.; J. C. Shields, Ltd., Preston Road, Lytham, Lytham St. Annes, Lancs.; D. J. Sullivan (Bristol), Ltd., 16 Burlington Road, Redland, Bristol, 6; Alexander Thomson and Co. (London), Ltd., 45a Kensington High Street, London, W.8.

War Department.—Contracts placed for the week ended Sept. 15:

Berkshire (Reading): electrical—Cawdells of Luton, Ltd., Luton.

Devon (Honiton): miscellaneous—Humphreys, Ltd., Plympton.

Hampshire (Crookham): insulation—Thermac Insulations, Ltd., London, S.W.1. Middlesex (Hounslow): miscellaneous—H. Goodsell and Son, Ltd., Maidstone.

Somerset (Taunton): redecoration—T. H. Kenyon and Sons, Ltd., London, W.9.

Warwickshire (Sutton Coldfield): building—Wilson Lovatt and Sons, Ltd., Wolverhampton.

Yorkshire (Catterick Camp): roadwork—W. and J. Glossop, Ltd., York; building—F. Shepherd and Son, Ltd., Richmond, Yorks.



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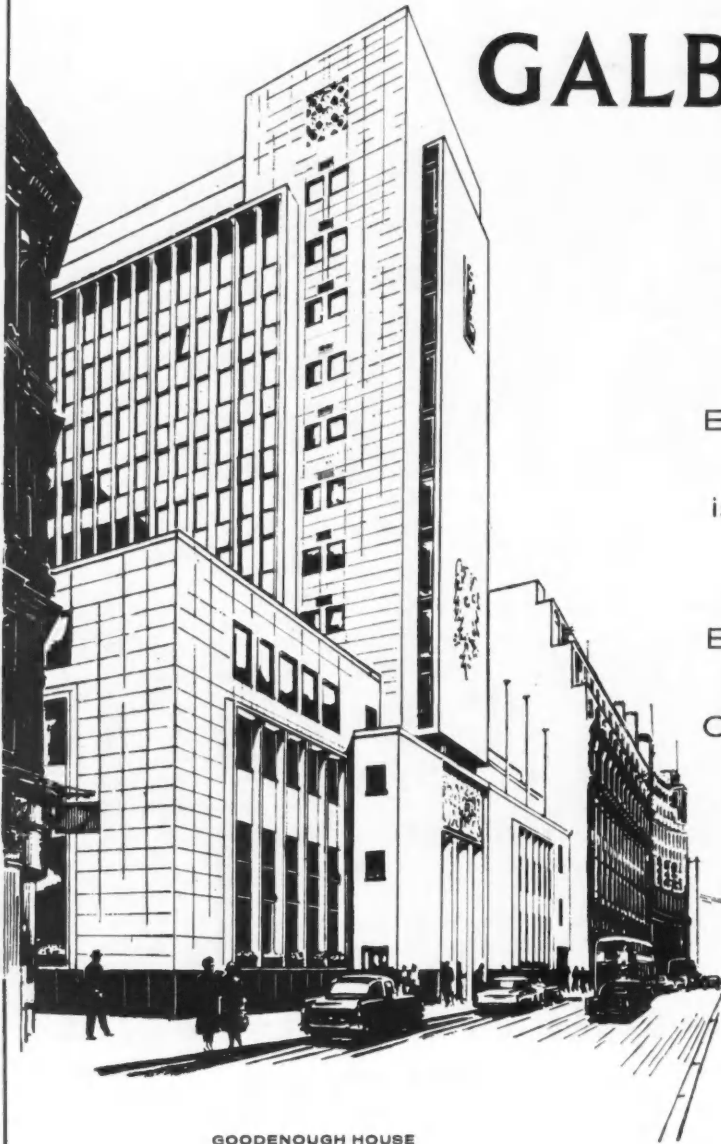
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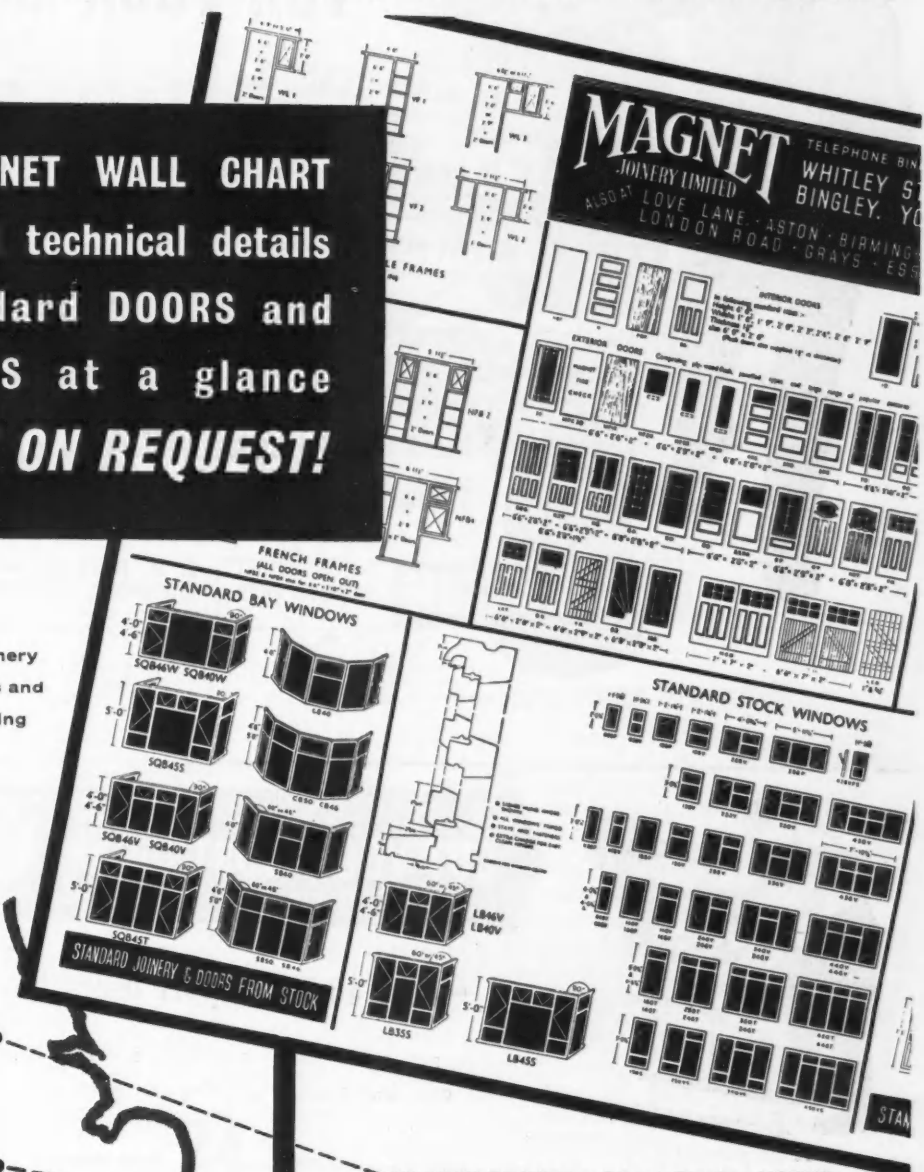
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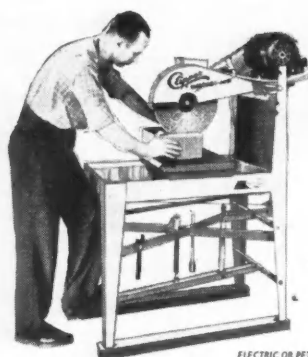
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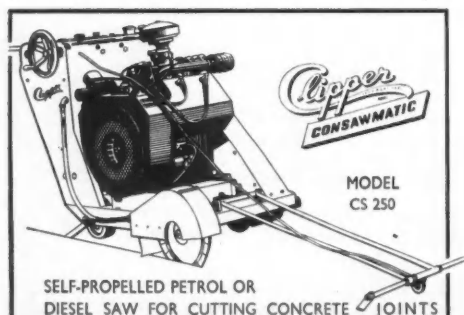
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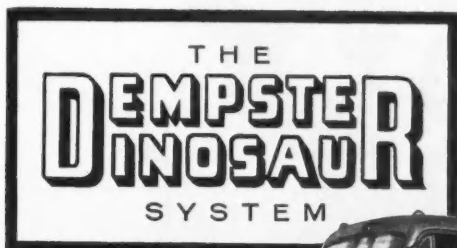


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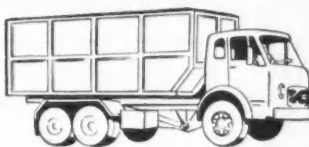
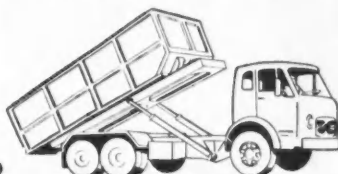
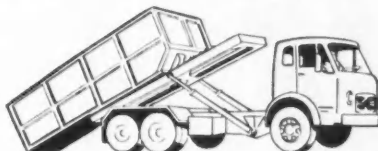
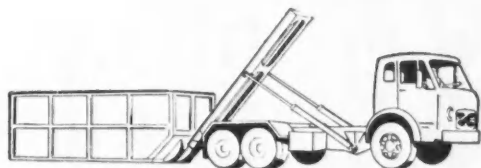
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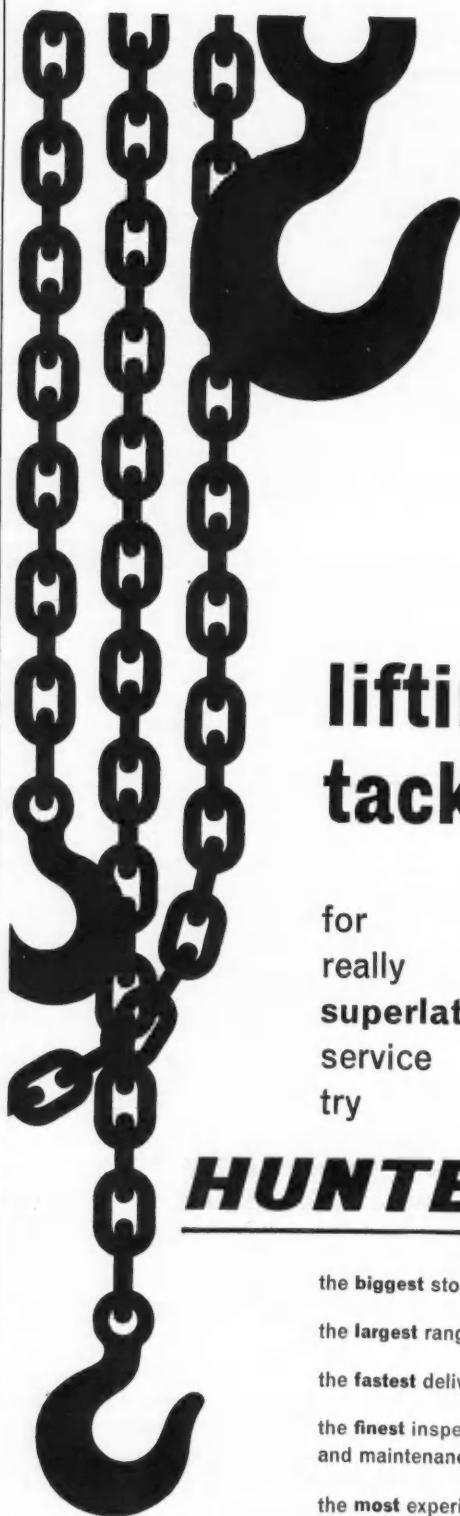
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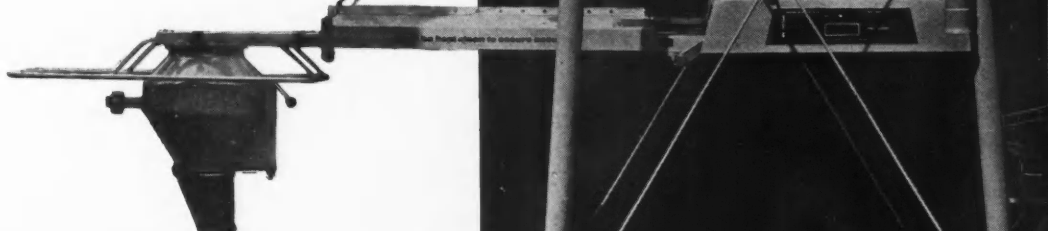


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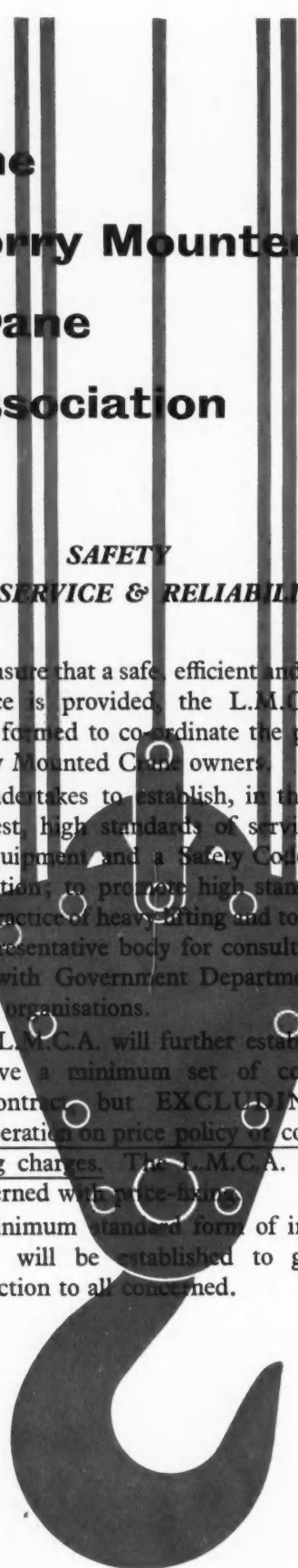
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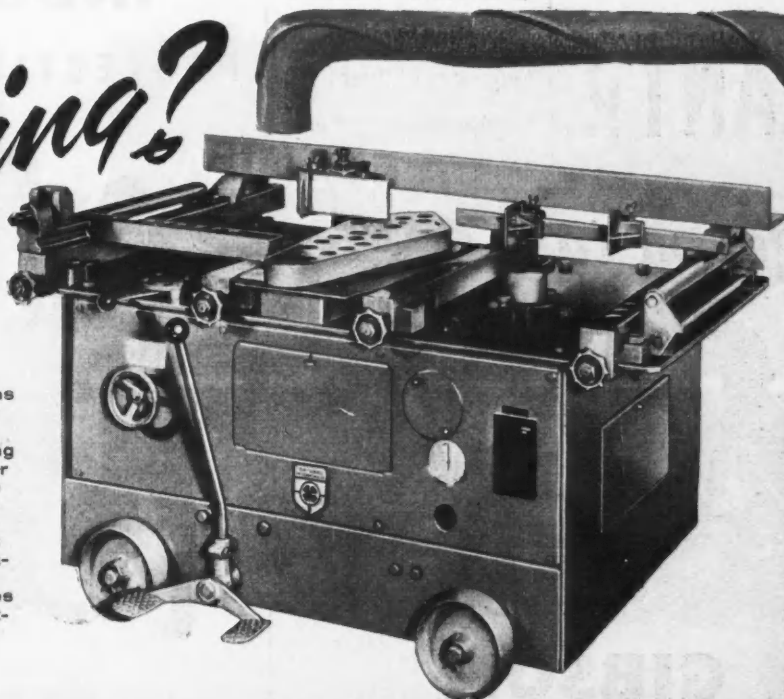
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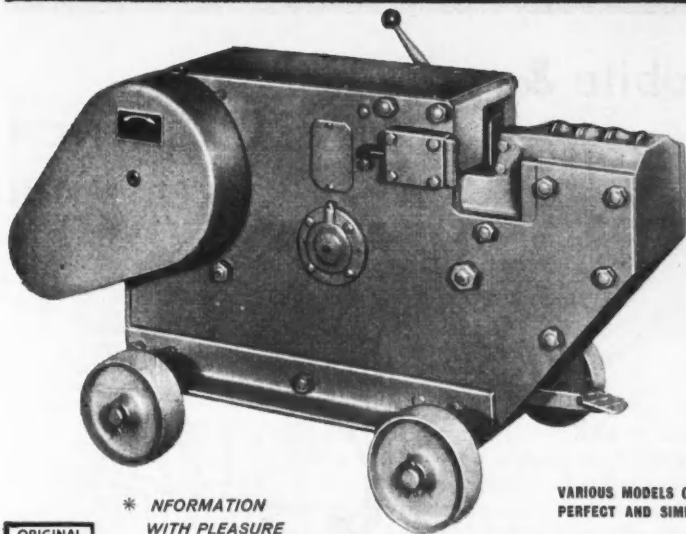
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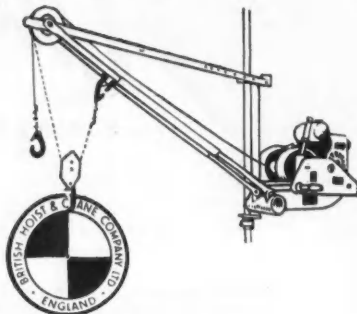
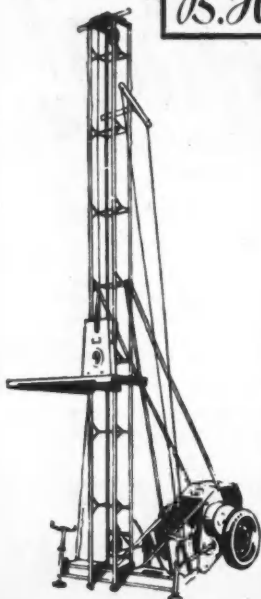
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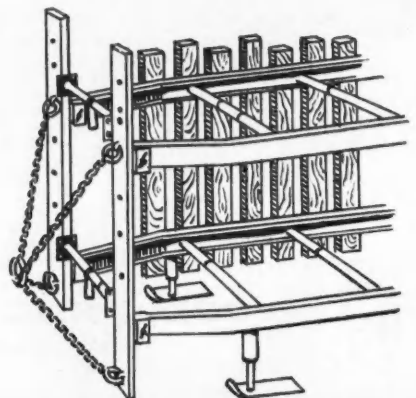
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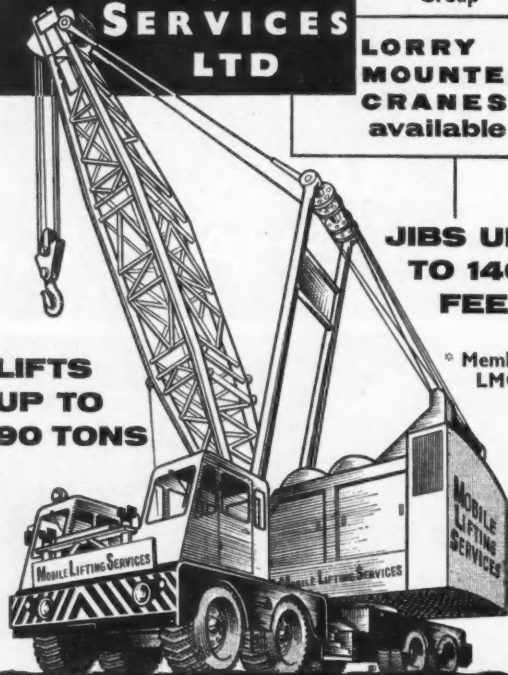
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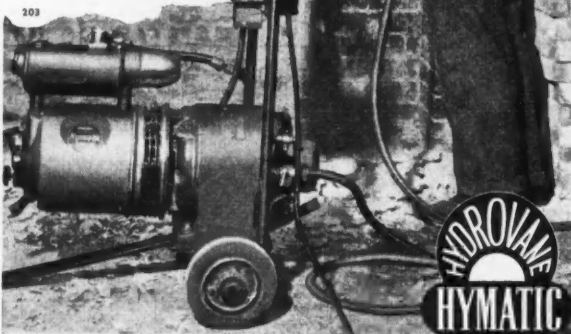
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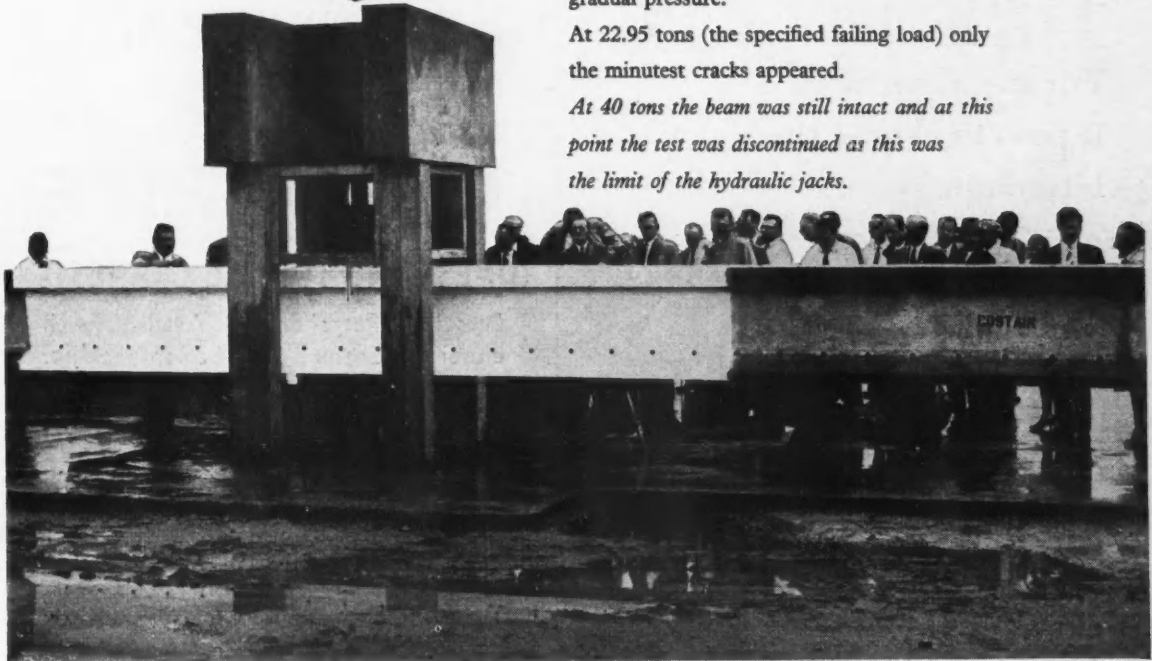
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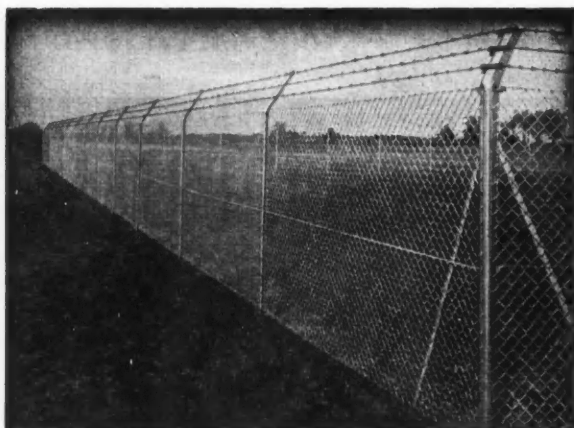
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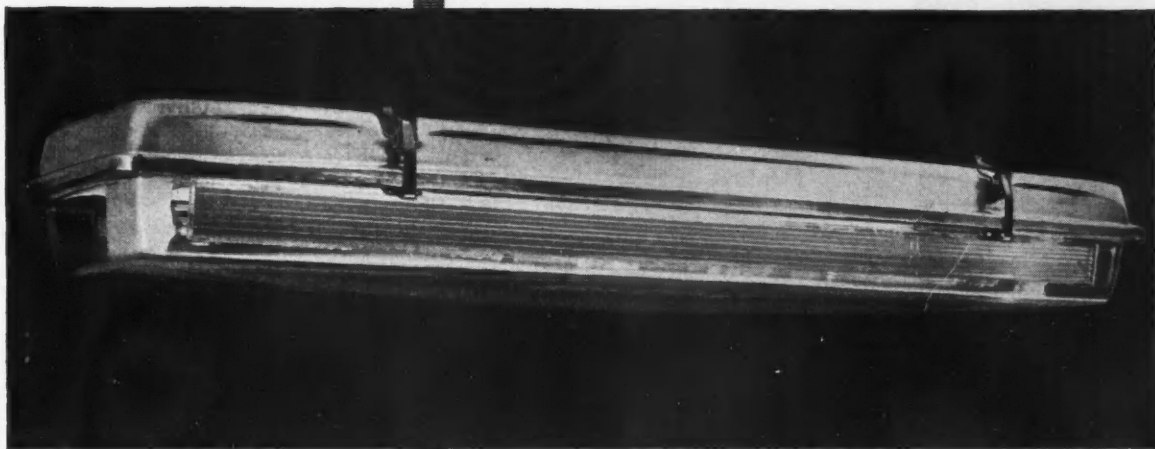
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Care has been taken in the design of this lantern to ensure that an adequate cut off is provided to carefully control the high output of light from the lamp to eliminate glare. A feature of the lantern is a very sharp run back from a peak intensity at about 75° to a negligible amount towards the horizontal and directions above.



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Highly efficient light control is achieved by a combination of refractors and reflectors. A narrow band refractor throws the light into the peak; at the same time the reflector canopy above it thrusts light into all directions below the horizontal up to and including the peak. Above the peak, a sharp cut-off is achieved by the spacing of the refractors well away from the lamp.

ATLAS ALPHA V CONSTRUCTION

The main body of the Alpha V Lantern is an aluminium pressing, and the clear Perspex cover is sealed to this by means of an expanded Neoprene gasket to which it is clamped by four stainless steel toggle catches. An internal aluminium casting is provided for bracket fixing; this also supports one of the two substantial bi-pin lampholders, the starter relay socket, and the porcelain terminal block for the incoming mains lead.

For full details write to:

Atlas Lighting Limited,

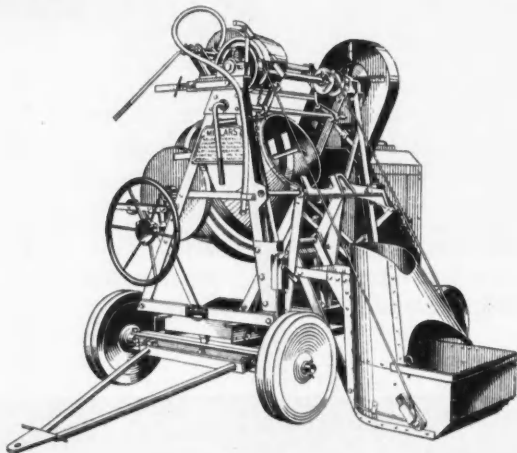
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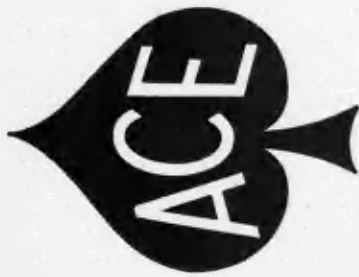
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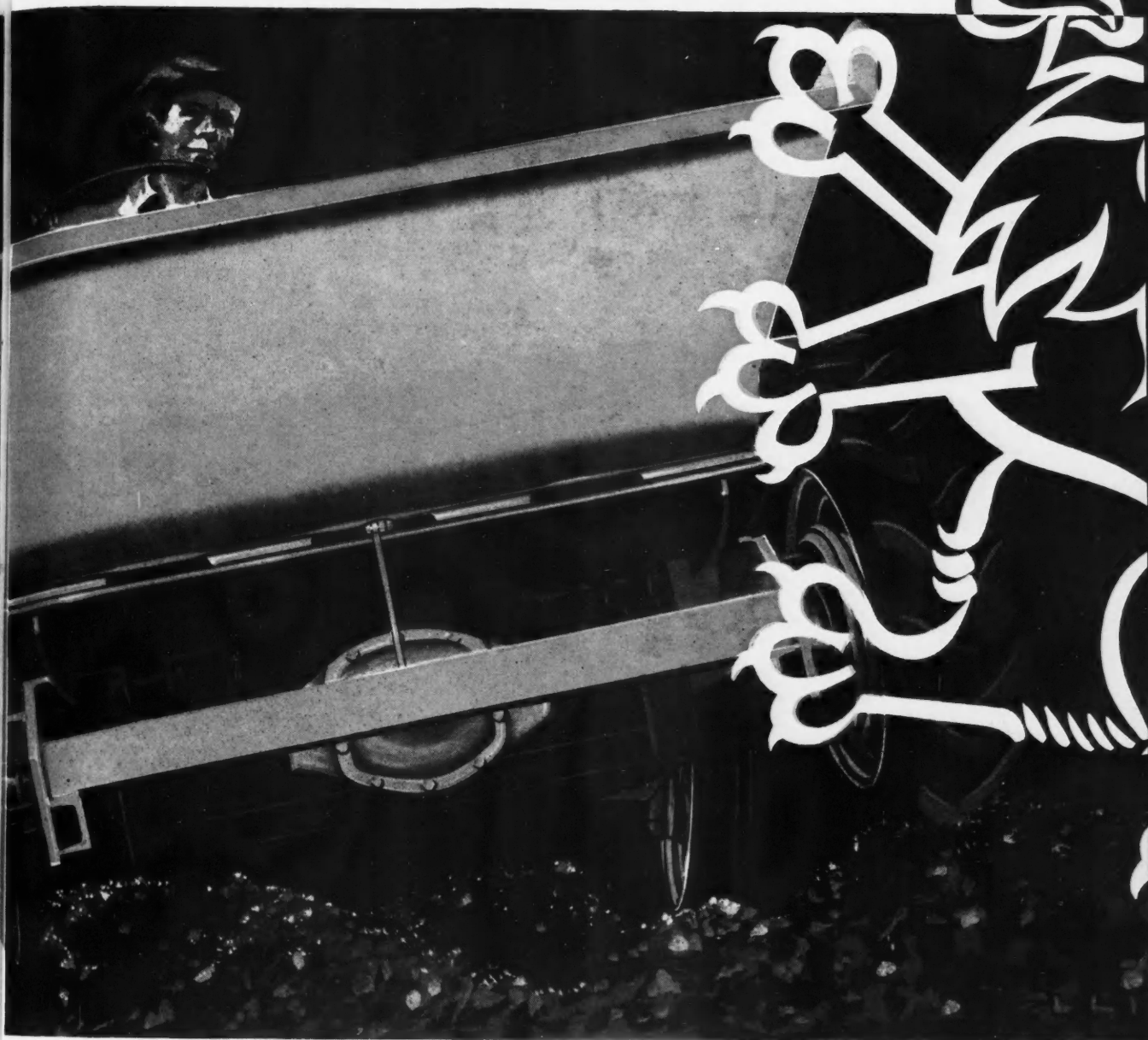
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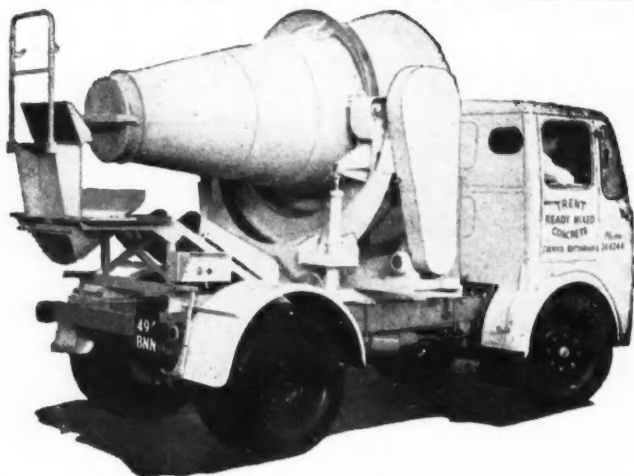
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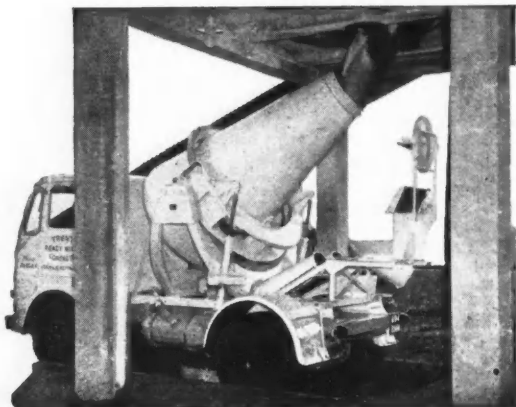
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(Continued from page 24)

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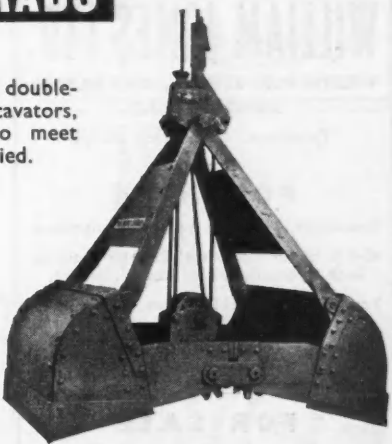
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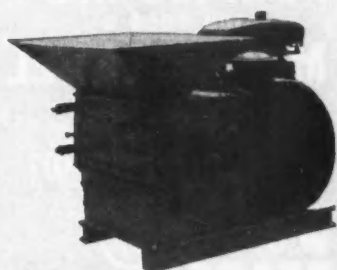
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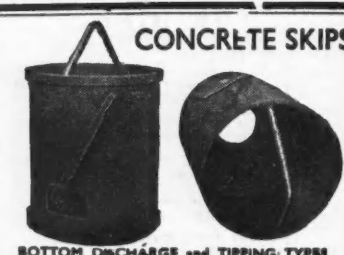
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(These can be altered to fit any 3yd. machine for £12.)
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16in. x 9in. Parker CRUSHER, with International Power Pack, Diesel. Buyer to dismantle, or we can arrange, £350.
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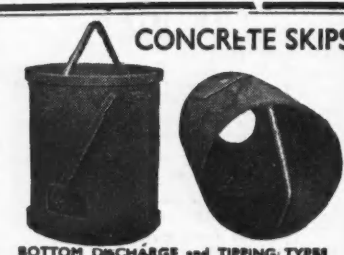
Glen Works, Deepcar, near Sheffield.

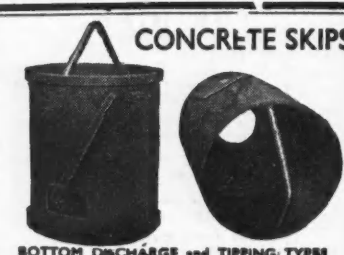
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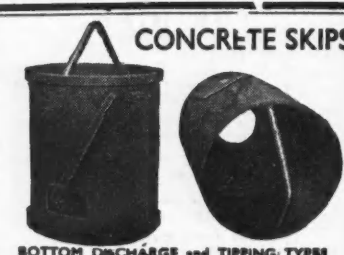
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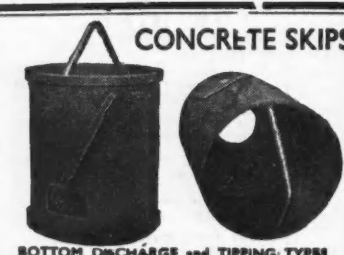
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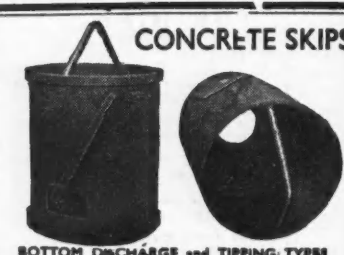
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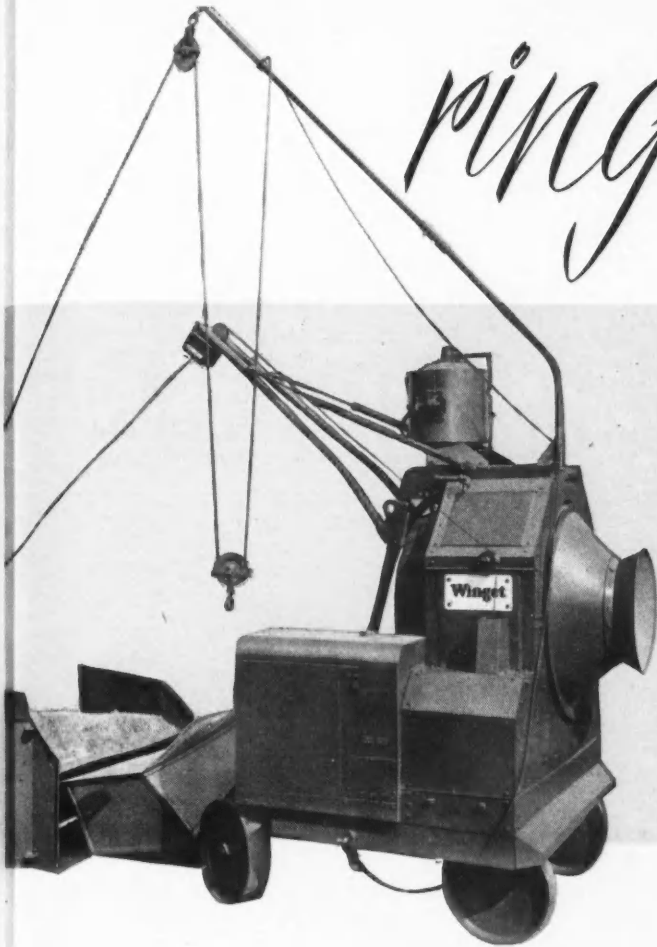
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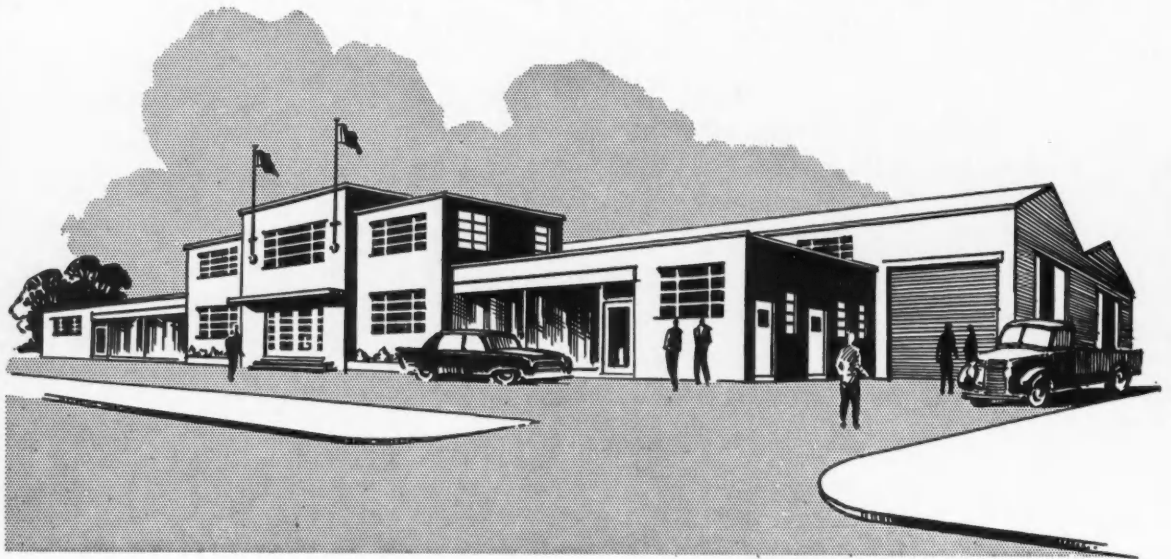
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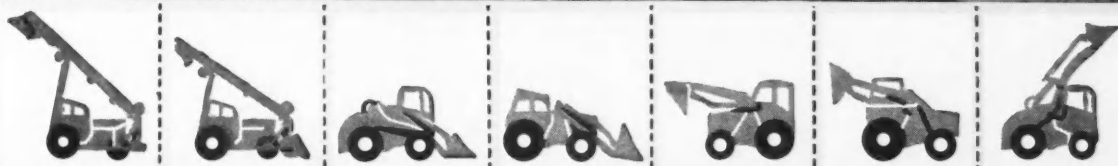
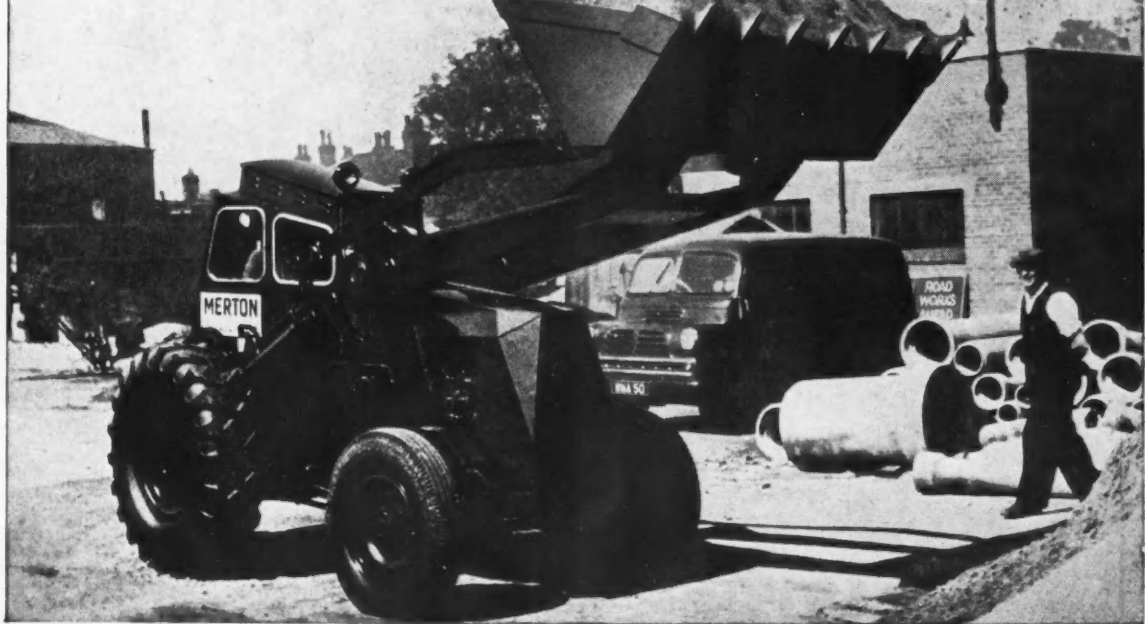
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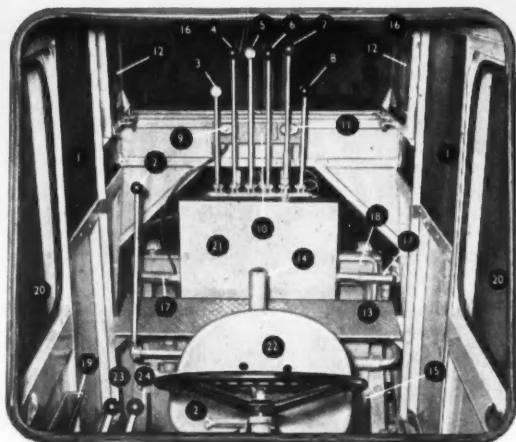
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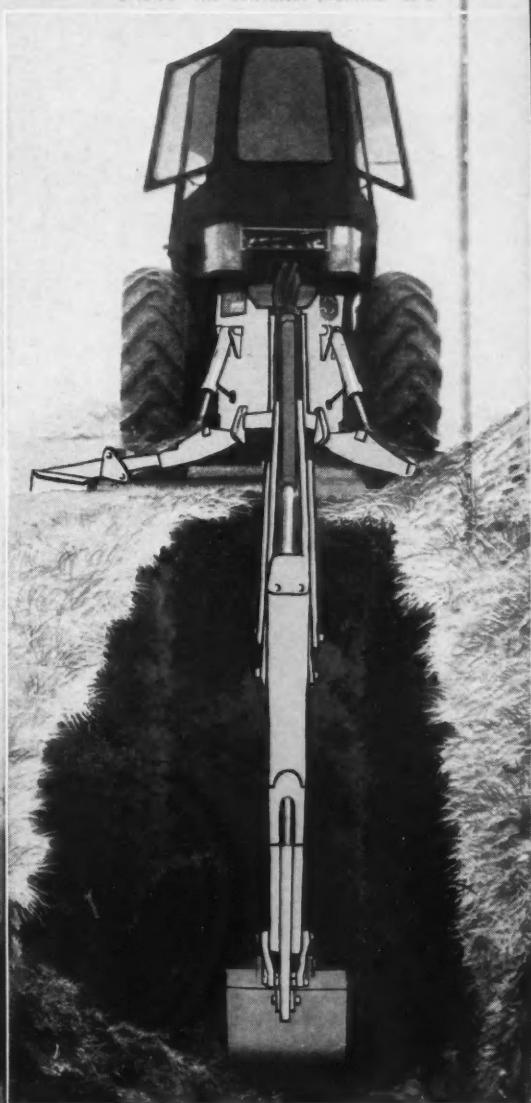


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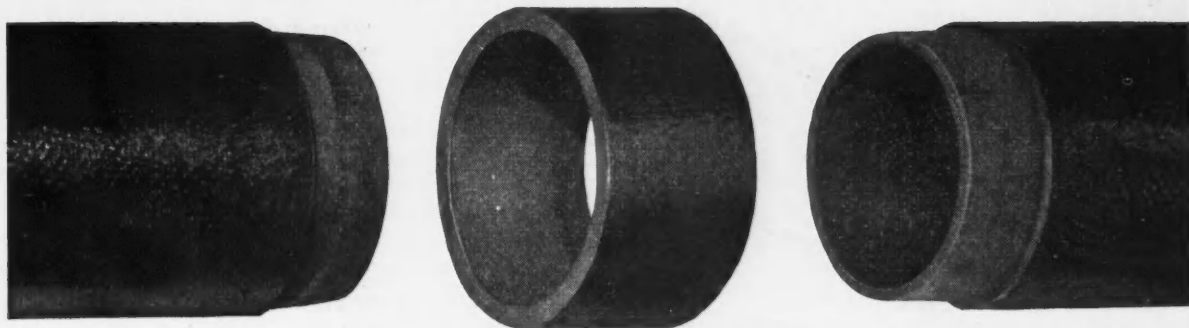
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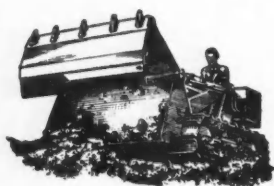
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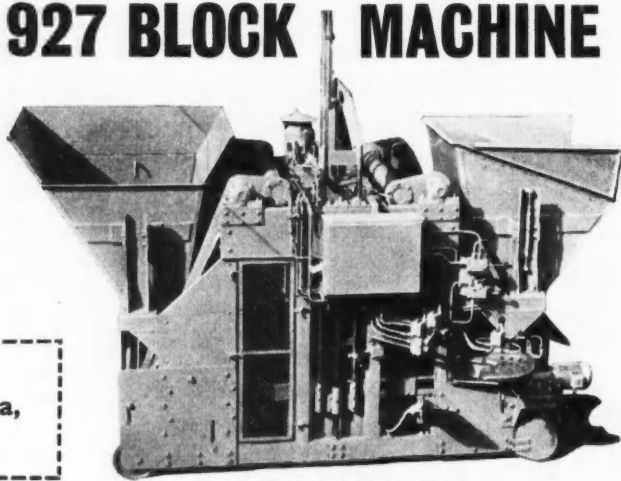
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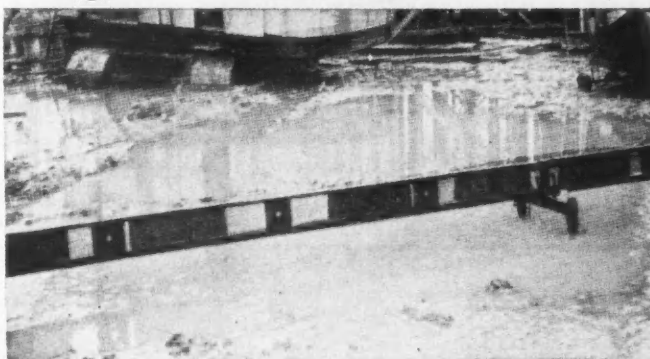
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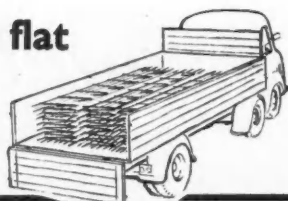
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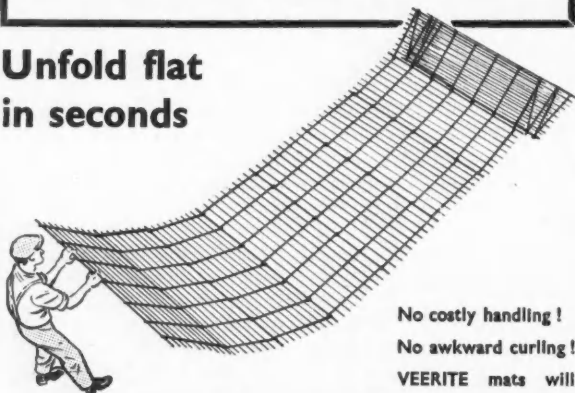
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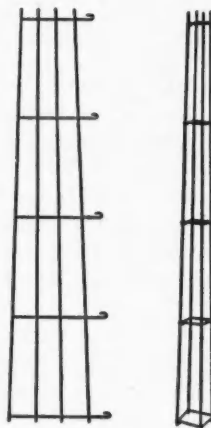
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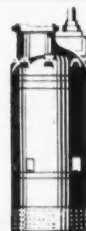
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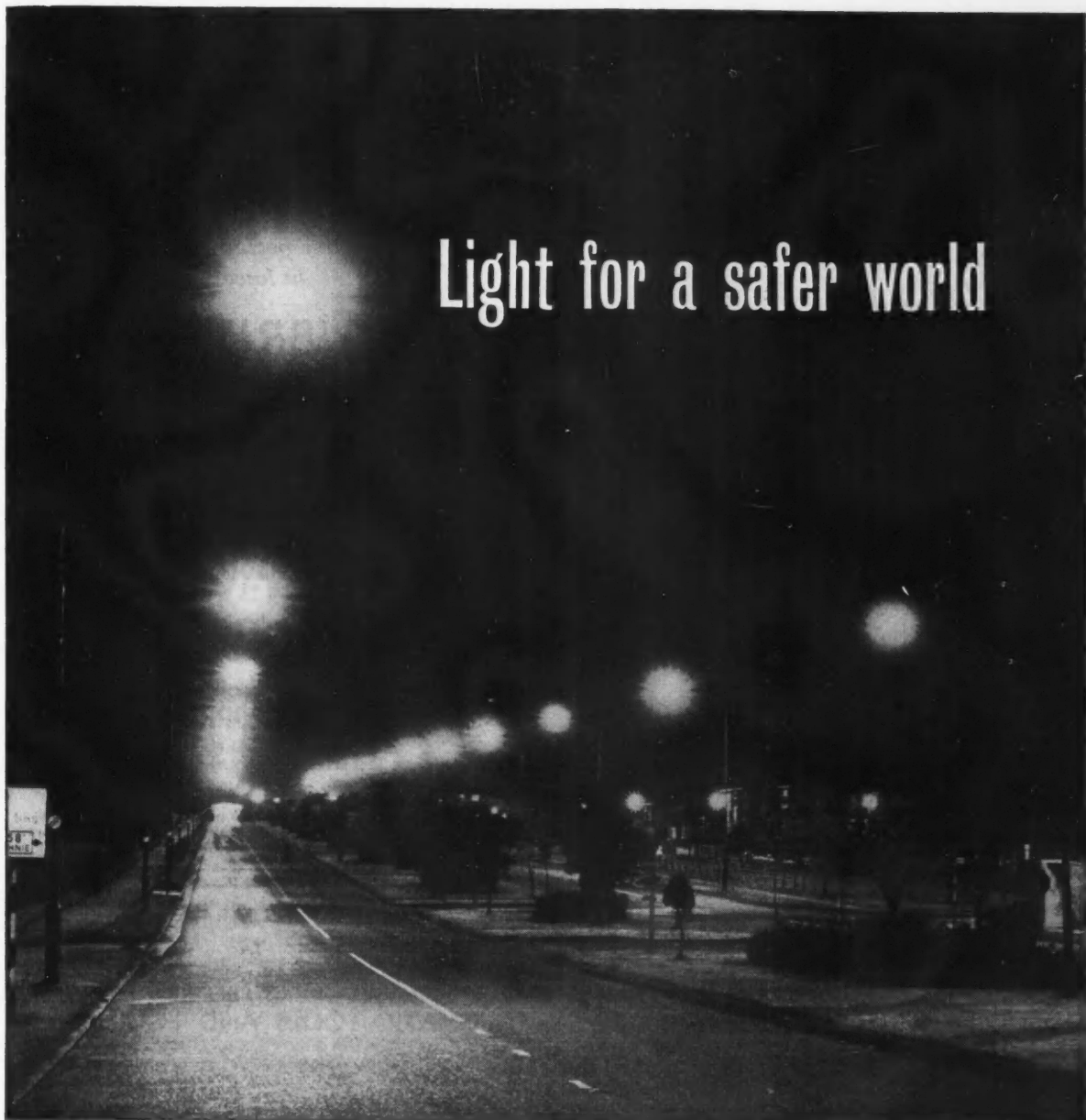


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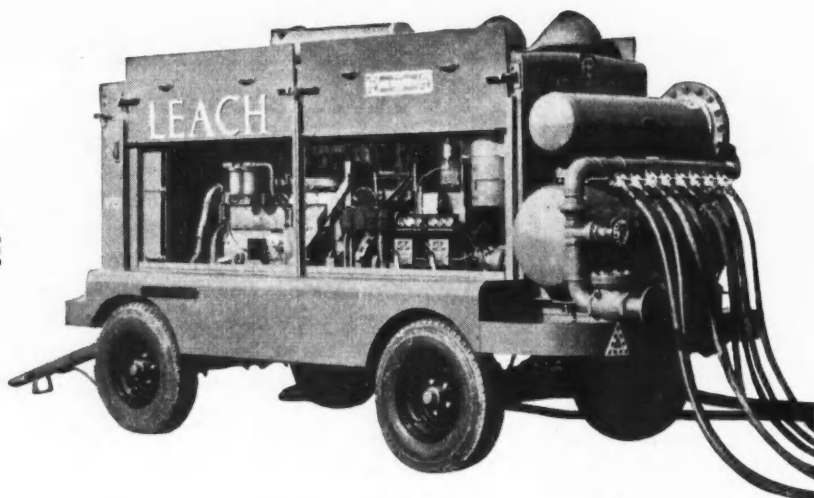
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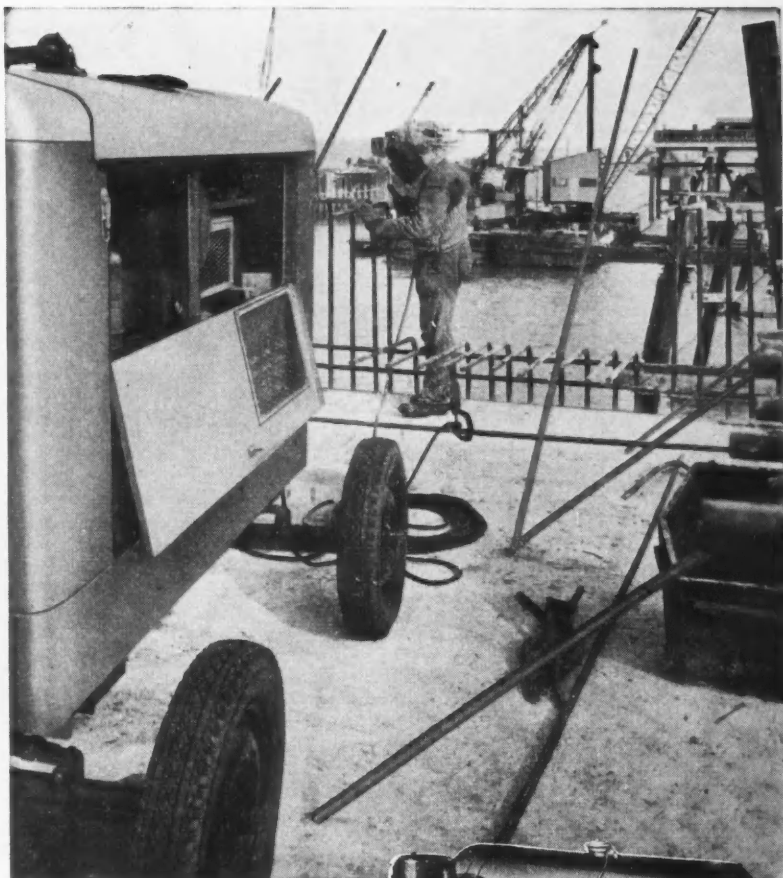
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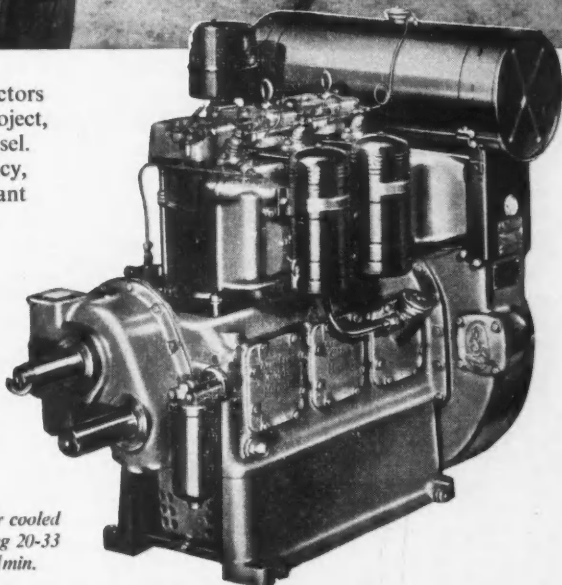
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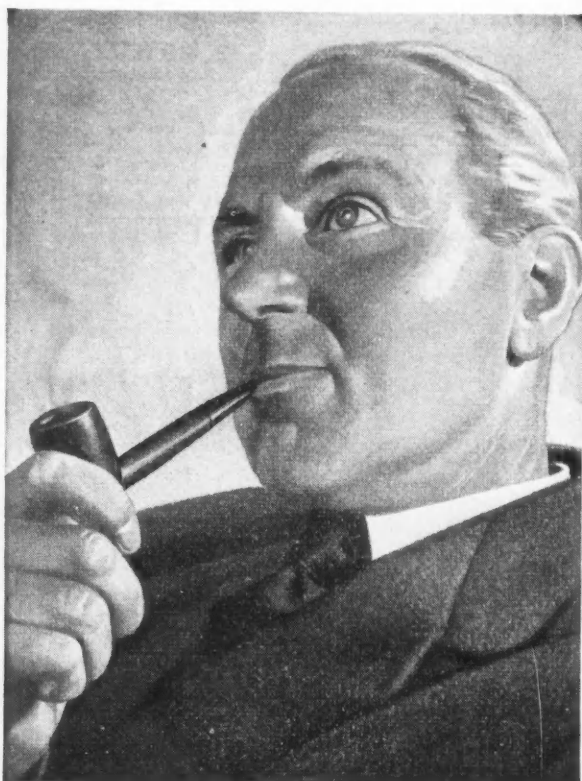
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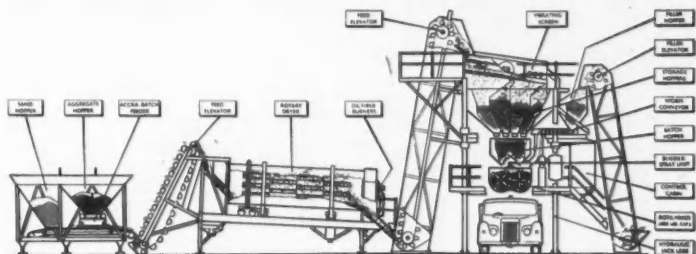
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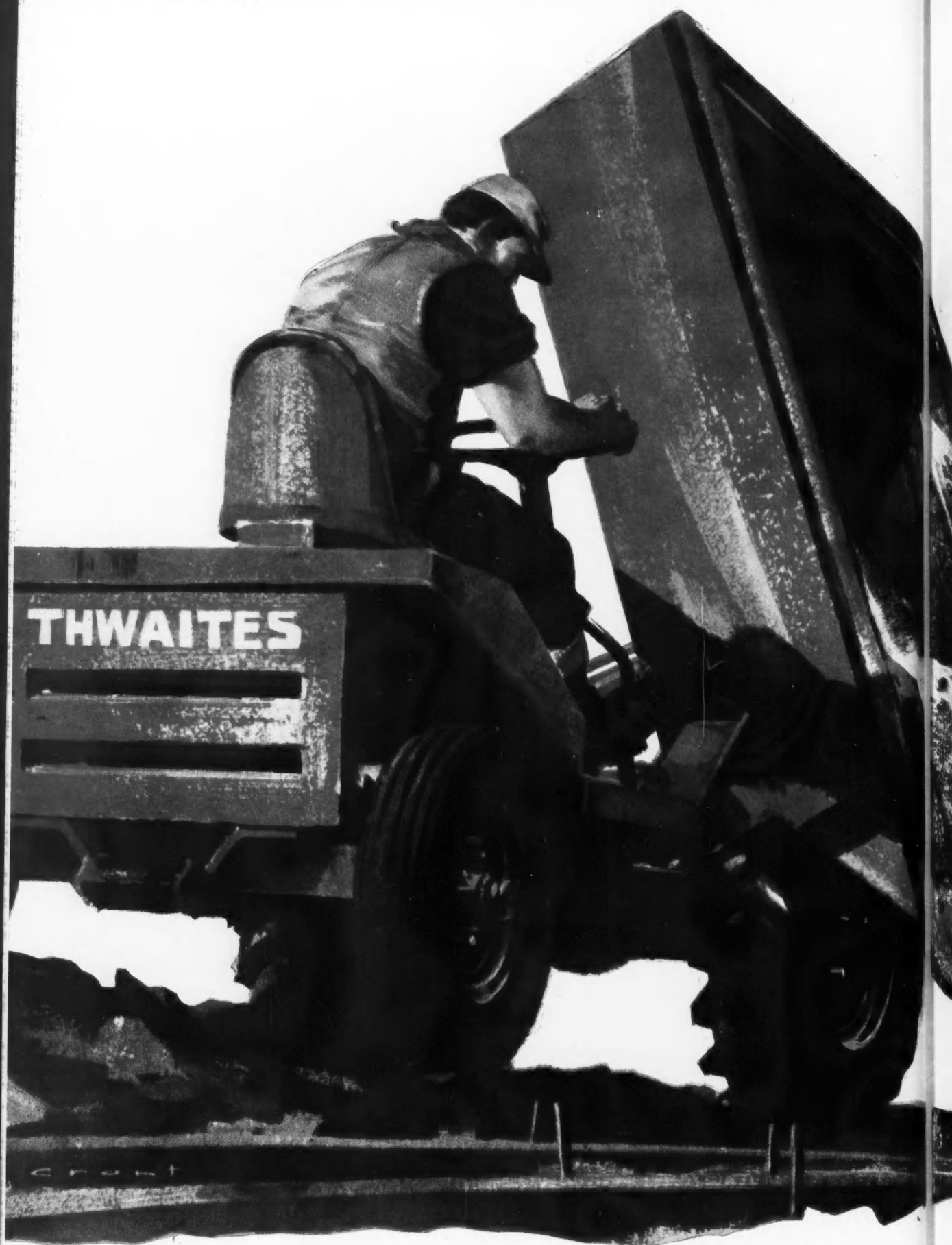


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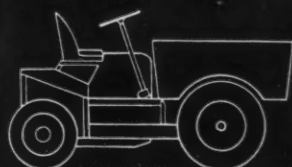
Thwaites

SIDE DISCHARGE DUMPER

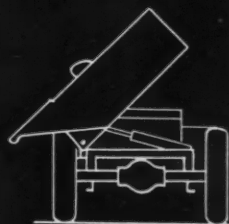
This completely new side discharge-dumper provides hydraulically operated finger tip controlled side discharge of concrete—1'-3" above ground level whilst travelling under load

SPECIFICATION

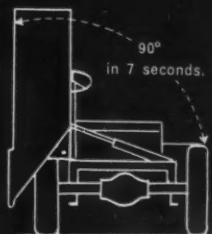
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- Turning Radius.** 9 ft. 6 ins.
- Engine.** Petter AVA2. 11.5 h.p. @ 1650 r.p.m. working off half speed shaft. Chain drive to clutch, slow running "Renold" $\frac{3}{4}$ " pitch.
- Gearbox.** Constant mesh, 3 forward, 1 reverse, gears hardened nickel chrome steel with a ground finish to ensure smoothness in running.
- Driving Axle.** 4 star differential with half shafts of 100 ton steel. 12" x 2½" brakes.
- Speeds:** 1st gear: 4 m.p.h.
2nd gear: 7½ m.p.h.
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- Pump.** 4½ g.p.m. @ 1,500 r.p.m. Chain drive.
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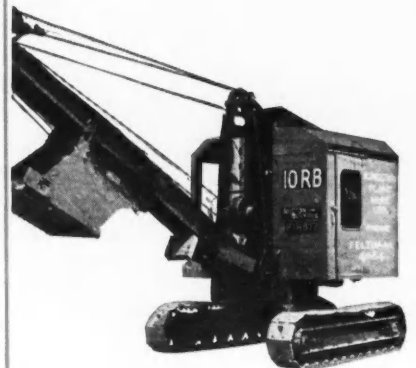


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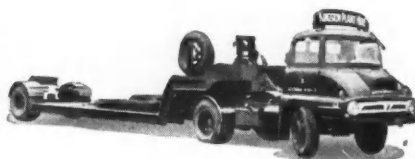
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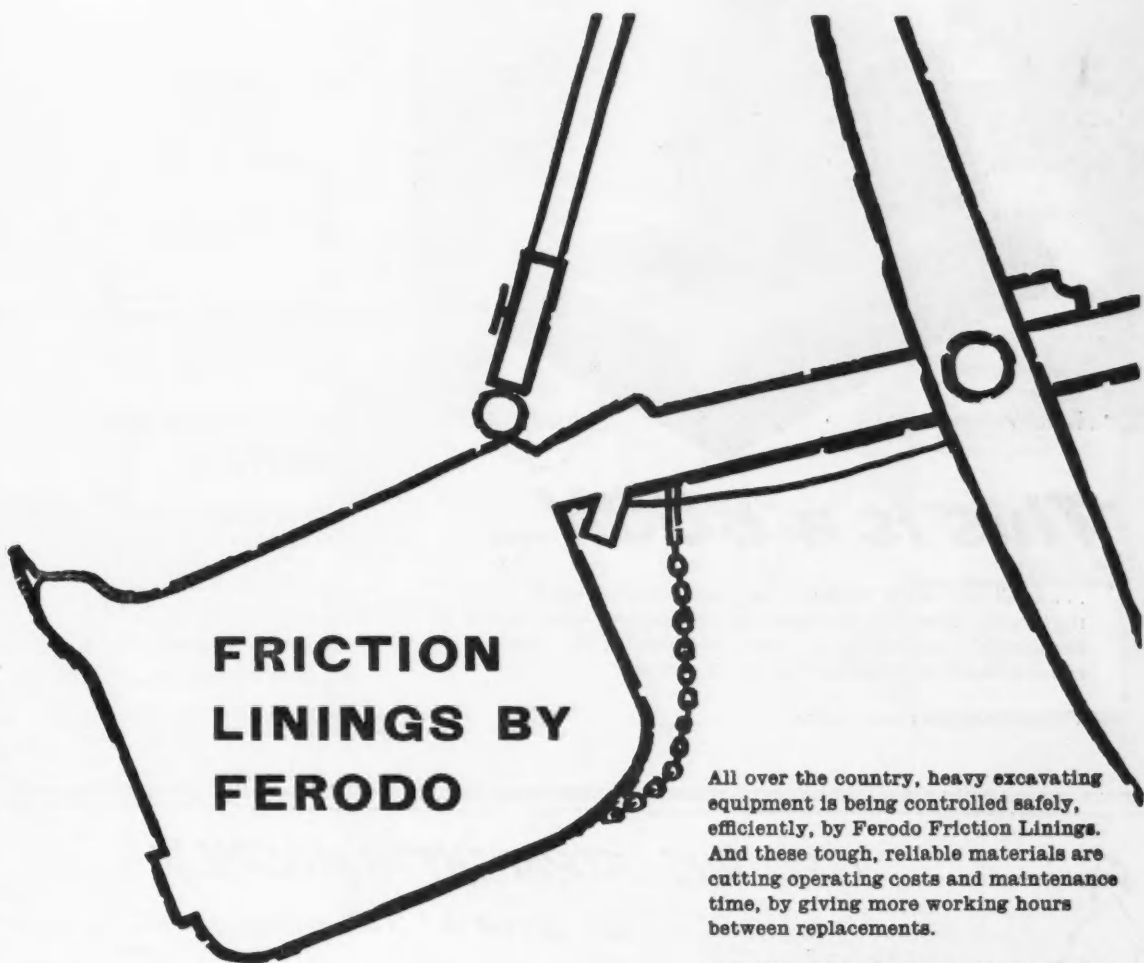
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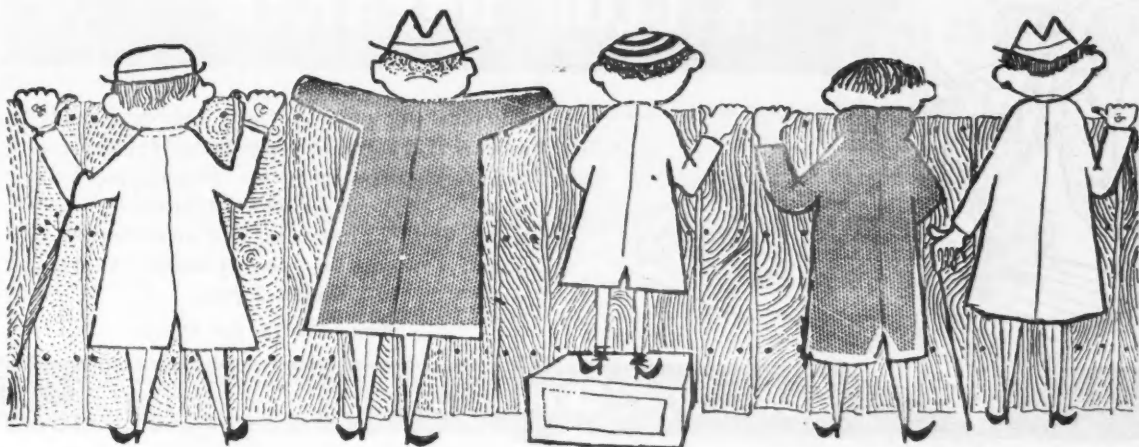


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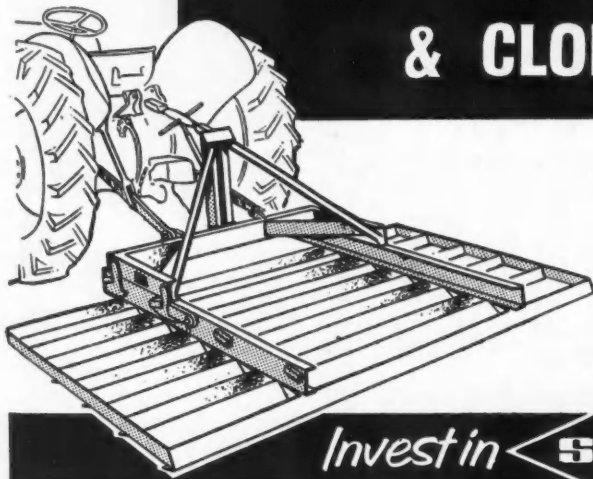
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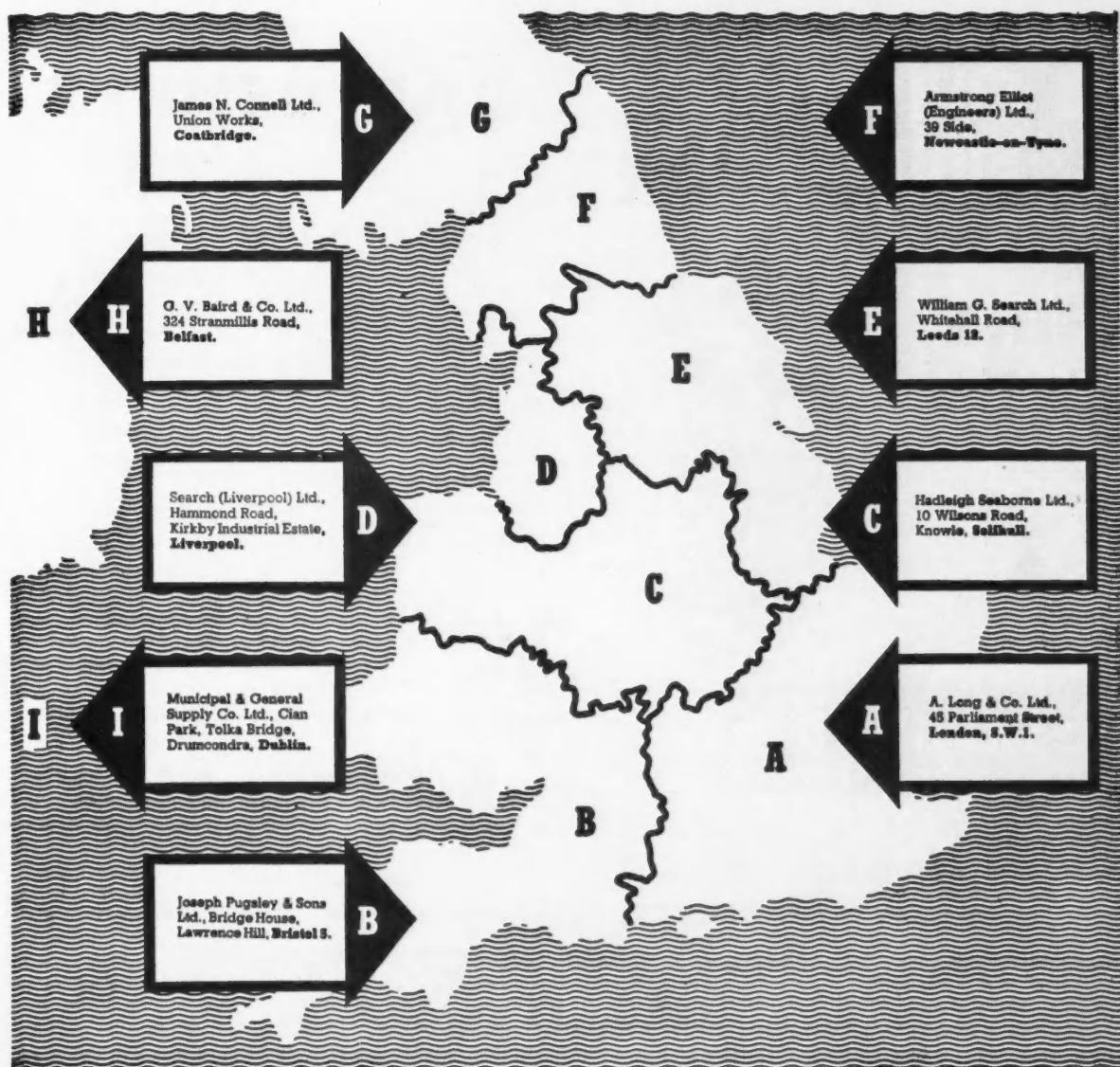


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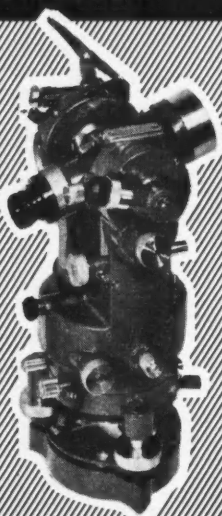
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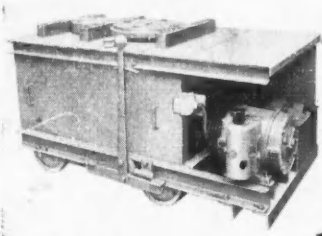
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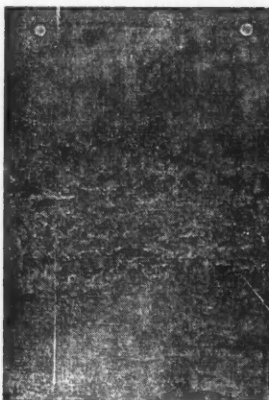
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BURROWS BROTHERS (EXCAVATIONS), LTD., Wolsley House, 108 Saltergate, Chesterfield. (Tel.: Chesterfield 7130.) Rubble, shale, black ashes, graded clinker, filter media, stone slag, sand, gravel and hoggin filling. Bulk quantity supplies.
GRAVEL HILL SAND QUARRIES, LTD., Tel.: Ashby (Leics.) 78. (See Leicestershire for details.)
HILTON GRAVEL, LTD., Milton, Derby. (Tel.: Etwall 422.) Also at Mercaston. (Tel.: Rillington 316.) And at Willington. (Tel.: Repton 3215.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Loughman 3171—15 lines.) (For details, see Nottinghamshire.)

DERBYSHIRE

HULLAND GRAVEL CO., LTD., Cheshire, Stoke-on-Trent. (Tel.: Cheshire 2323/4, 2119 and 2195.) Manchester Office: 454 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)
SALISBURY AND WOOD, LTD., Matlock (Tel. 272/273). Limestone and granite, dry or coated gravel and sand; kerbs, slabs, blocks, posts, reconstructed and natural stone; lime and ground limestone. Lightweight aggregates, ashes, red shale.

DORSET

BULL BROS., S. AND L., LTD., 126A High Street, Winchester. (Tel.: 2264.) (See Hampshire.)
DANGERFIELD, F. J., & CO., LTD., 261A Finchley Rd., London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
DORSET Limestones, LTD., Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) Tarred and bituminous macadam, foundation materials, limestone for all purposes and to all gradings. Portland stone aggregates and Portland capstone aggregates for reconstructed stone. By road and sea.
GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)
HALL AND CO., LTD., 8 Commercial Road, Parkstone (Tel.: 5379.)
MOORE (VERWOOD), LTD., Verwood, Wimborne Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggin, path gravel.

DURHAM

BRAITHWAITE, A. and CO., LTD., Knaresborough, Yorks. Quarry at Catterick. (Tel.: Old Catt. 157.) (For details see Yorkshire.)

ESSEX

ALRESFORD SAND AND BALLAST CO., LTD., Alresford Creek, near Colchester, Essex. (Tel.: Wivenhoe 341/494.) Pits at Alresford Creek, Brightlingsea, Stoke-by-Nayland, Bures and Holland. All grades of washed shingle, concreting sand and building sand. Road and water transport.
BAKER, F. AND E., LTD., 73 High Road, Rayleigh, Essex. (Tel.: Rayleigh 1031/2.) Pits at Great Toppam, Heybridge and West Tilbury. (See Leics.) of washed material supplied and delivered; also hardcore, ashes and bricks.
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)
BUCBRICKS COMPANY, LTD., Sand and Ballast Pits, Martells, Ardleigh, Colchester. (Tel.: Ardleigh 374.) All grades of washed aggregate, concrete, building sand, asphalt, grit. Sterilised dry sand accurately graded to buyers' requirements.
DANGERFIELD, F. J., & CO., LTD., 261A Finchley Rd., London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)
FERRIS PITS, LTD., The Limes Garage, Fencible Road, Barkingside, Essex. (Tel.: Hainault 5271/2-3001/2.) Pits at Orsett, near Stanford-le-Hope, and Lomminster. All grades of washed aggregates, plastering and building sands supplied and delivered, also hardcore and ashes.
HALL AND CO., LTD., Manor Road, Romford. (Tel.: Romford 42321.) Pits at Aveley 42321. Gravel aggregates, concrete, plastering and building sand.
HUNNABLE, F. A., AND SON, LTD., Rayne Road, Braintree, Essex. (Tel.: Braintree 151 and 152.) Graded washed stone, 1/2 in. to rejects; washed concreting sand and washed soft building sand. Classified sand for asphalt. Ready mixed concrete to all grades. Pits at Braintree, Bocking, Seasley End, Hedingham and Alphamstone.
LEIGH BUILDING SUPPLY CO., LTD., Head Office: 956 London Road, Leigh-on-Sea, Essex. (Tel.: 79264—5 lines.) All grades washed aggregates, building sand, hardcore, ashes, bricks, granite.
PETERS AND BARHAM, LTD., 309 South Street, Romford. (Tel.: Romford 44141—7 lines.) Washed and crushed gravel, all sizes; sand. Pits at Asheldham, Chignall, James, Dagenham, Bocking, Waltham, North Ockendon, Roxwell, West Thurrock.
READ, P. T., LTD., Fairlop Alreid, Forest Road, Ilford. (Tel.: Hainault 6111/2/3.) High-grade sands, ballast and shingles supplied and delivered; also ready-mixed concrete.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire.) Pits at St. Ives and Gosfield, near Halstead.
STANWAY CONTRACTS, LTD., Upper Edwards Hall, Eastwood, Southend-on-Sea. (Tel.: Eastwood 55161.) Sand and gravel pits at Rochford and Woodham Walter. Graded aggregates supplied or delivered.
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Washed and graded aggregates. Local Office and pits: Tillingham 287.
WIVENHOE SAND, STONE AND GRAVEL CO., LTD., Wivenhoe, near Colchester, Essex. (Tel.: Wivenhoe 231.) High-quality washed aggregates of all grades.

GLOUCESTERSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.
BENJAMIN AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)
COKE, T. F. (CHELTENHAM), LTD., 267 Gloucester Road, Cheltenham. (Tel.: Cheltenham 4717/474.) Sand, graded gravel aggregates, hardcore, limestone, chippings, tarred and bituminous limestone, concrete blocks, fence posts, etc.
CROMHALL QUARRIES, LTD., Cromhall, Wotton-under-Edge, Glos. (Tel.: Failand 346/7.) Concrete aggregates, pre-graded in large quantities. Tar-macadam, bituminous macadam, macadam and cold asphalt to B.S.S. for hand or machine laying.
GRIFFITHS, A. AND SONS, Churchdown, Gloucester. (Tel.: Churchdown 3135 and 2216.) Pit, quarry and dredger owners. All grades and types aggregate material.

Rates for insertion in this GUIDE will be forwarded on application

CONTRACTORS'

GUIDE TO AGGREGATES

GLOUCESTERSHIRE

HALL AND CO. LTD., Longmoor House, Ashton Vale Road, Bristol 3. (Tel. 83001.) Gravel aggregates, concreting, plastering and building sand.
POOLE (LECHLADE), LTD., Gravel Pit, Burford Road, Lechlade, Glos. (Tel. Lechlade 219.)
TAYMAC, LTD., Wootton Bassett, Swindon. (Tel. Wootton Bassett 391—5 lines.) (See Wiltshire.)
WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel. Coleford 3158/9.) Tanned and bituminous limestone macadam, asphalt, concrete aggregates, dolomitic media, engineering, facing and common bricks for all purposes. Delivery road or rail.

HAMPSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel. Oxford 35421—10 lines.) Pits at Oxford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel. Sutton Courtenay 275.) Theale, near Reading. (Tel. Theale 352.)
BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel. Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)
BULL BROS., S. AND LTD., 126A High Street, Winchester. (Tel. 2264.) Concrete aggregates (reconstituted pit-mixed, weighbatched to meet any specification); also ballast, hoggins, path gravel and sand from own pits at Fawley, Lockerley, Ringwood, Romsey, Sway and Totton.
DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel. HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)
GILSON, S. C. AND SONS, LTD., Holcombe, near Bath. (Tel. Stratton-on-the-Fosse 243.)
HALL AND CO., LTD., Baltic Wharf, Marine Parade, Southampton. (Tel. Southampton 21234.) and at Portsmouth. Pits at Ringwood, Highbridge and Totton. Gravel aggregate, concreting, plastering and building sand.
HASKINS, G. AND SONS, Queen Street, Emsworth. For washed sands and graded aggregates, path and road gravels, hoggins, clinker, ashes. (Tel. Emsworth 2271.)
MOREYS (VERWOOD), LTD., Verwood, Wimborne, Dorset. (Tel. Verwood 234.) Concrete aggregates, building sand, hoggins, path gravel.
NEW MILTON SAND AND BALI CO., Lymington Road, New Milton, Hants. (Tel. 37 and 566.) Guaranteed uncrushed, washed, screened and graded concrete aggregates. All sizes. Washed sharp and fine sands.
PRIVETT, W. G. AND SONS, LTD., Drayton Lane, Portsmouth. (Tel. Gosham 70059.) Concrete aggregates, building sand, hoggins, ashes, washed and graded filter media, etc.
RALPH OF BASINGSTOKE, LTD., 37 Kemphost Lane, Basingstoke, Hants. (Tel. 859.) Concrete aggregates, building sand, path gravel, hoggins, etc.
WESSEX SAND AND GRAVEL CO., 126 Hillside Avenue, Southampton. (Tel. 56616.) Pits at Romsey and Fawley. Concrete aggregates, hoggins, building sand, etc.
WRAYSLEY SAND AND GRAVEL CO., LTD., Station Road, Theale, Reading, Berks. (Tel. Theale 373.)

HEREFORDSHIRE

BENGRIY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel. Kingsland 301/4.) Suppliers of all grades of crushed concrete aggregates, road metallings, pitching stone, hardcore and coated macadam.
CLEE HILL TRANSPORT AND ROLLING CO., LTD., Ludlow, Salop. (Cleehillstone 284.) (See Shrops.)
HASH ROCKS, STONE AND LIME CO., LTD., Prestleigne, Radnor. (Tel. Prestleigne 352.) All grades of tarred and bituminous macadam, roadstone, chippings and concrete aggregates, etc.
OLD RADNOR TRADING CO., LTD., (Tel. 11.) Granite and limestone aggregates, coated macadam, concrete products.
SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel. 961.) Salop.
WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel. 3158/9.) (See Gloucestershire.)

HERTFORDSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel. Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)
DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel. HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)
EASTWOODS SALES, LTD., Eastwood House, City Road, E.C.1. (Tel. Clerkenwell 2040.) Broxbourne pit. (Tel. Hoddesdon 2456.) Producers and distributors of all grades of washed aggregates.
GABRIEL, C. LTD., Palmers Lane, Enfield, Middx. (Tel. HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Hertford and Enfield.
HALL AND CO., LTD., Railway Yard, Orchard Road, Stevenage. (Tel. 775.) and at Hatfield. Gravel aggregates, concreting, plastering and building sand.
HARTIGAN, G. F. X., LTD. (See Buckinghamshire.)
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel. St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)
WEBB, G., CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel. 59966, 53969, 50353 (night).) (See Cambs.)
WINFIELD, HENRY, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel. Berkhamsted 1208/9.) Pits at Hemel Hempstead, Watford, West Hyde, Rickmansworth. Concrete aggregates, hoggins, building sand.

HUNTINGDONSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel. Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)
FERRERSAND AGGREGATES, LTD., Northampton Road Quarries, Rushden (2354/5). (See Northants.)
GRAVEL PRODUCTS (HUNTS), LTD., Little Paxton, St. Neots, Hunts. (Tel. St. Neots 308.) Pits at Little Paxton, St. Neots, Hunts.; and Blunham, Beds.
NENE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough. (Tel. 5334/5.) and Ship End Quarries, Wansford, near Peterborough. (Tel. Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.
ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel. St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.

HUNTINGDONSHIRE

WEBB, G., CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel. 59966, 53969, 50353 (night).) (See Cambs.)
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel. 4587/8/9.) (See Bedfordshire.)

KENT

BRASTED SAND PITS, Brasted, Kent. (Tel. 586.) London office: 10A Ellery Street, S.E.15. (Tel. New Cross 3337.) Soft and plastering sands, lime and sand-mix dry, hardcore, S.M. bricks, ashes, etc.
BROWN BROS. (SITTINGBOURNE), LTD., Chalkwell Road, Sittingbourne, Kent. (Tel. Sittingbourne 3330.) Sand, ballast, shingle, hardcore, clinker, breeze blocks, etc.
CLUBB, J., LTD., Dartford, Kent. (Tel. Dartford 25431.) Pits in North Kent, Medway area and Sevenoaks district. All washed and crushed gravel aggregates, concreting and building sand.
DIAMOND TREAD CO. (1938), LTD., Ditton Court Quarry, Larkfield, near Maidstone. (Tel. West Malling 3444.) Quarry owners: tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 21-22 Old Bailey, London, E.C.4. (Tel. City 7001—10 lines.)
DIAMOND TREAD CO. (CHART), LTD., Swan Lane Quarries, Little Chart, Ashford, Kent. Quarry owners: tarmacadam, bituminous macadam and dry roadstone suppliers. All inquiries to Area Office: Ditton Court Quarry, Larkfield, near Maidstone, Kent. (Tel. W. Malling 3444.)
HALL AND CO., LTD., Canning Street, Maidstone. (Tel. Maidstone 51051.) and at Folkestone and Hayes. Pits at Lunston, near Larkfield. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.
HARRIS, M. P. AND CO., LTD., Station Road, Paddock Wood, Kent. (Tel. 385.) (See Sussex.)
TILBURY CONTRACTING AND DREDGING CO., LTD., Postley, Maidstone. (Tel. Maidstone 55401/2/3.) Suppliers of tarred, bituminous and dry Kentish ragstone, sea walling, asphalt fillers, Scotch granite and kerbing.

LANCASHIRE

BROOMBS, LTD., Sandside, Milnthorpe. (Tel. 3251/2.) Westmorland. (See Westmorland.)
BUCKTON QUARRY, Broken stone, all grades. (Tel. Mossley 123.) Or write Main Road, Oldham.
CASTLETON SAND AND GRAVEL QUARRIES, LTD., Trows Lane, Castleton, nr. Rochdale. (Tel. Castleton 57100.) Bacup. (Tel. Bacup 287.) Washed pit sand, crushed washed stone aggregates: pitching stone.
CROXDEN GRAVEL, LTD., Cheadle, Stoke-on-Trent, Staffs. (Tel. Tean 393.) Manchester Office: Blackfriars 3765/7. Plant capacity, 2,000 tons per day.
DUNNING AND SON, LTD. (See Shropshire.)
HARTLEY, JOHN W., LTD., Lundsfield Quarry, Carnforth, Lancs. (Tel. Carnforth 100.) Large producers of highest quality washed sands, clean washed natural sand and crushed gravel aggregates for all construction purposes.
HILTON GRAVEL, LTD., Rice Street, Liverpool Road, Manchester, 3. (Tel. Deansgate 5455 and 5456.) Quarries at Cheadle, Staffs. (Tel. Tean 241.) And at Longton, Stoke-on-Trent. (Tel. Longton 32196.)
HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel. Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel. Chorlton 2274/5.)
PENMANNAW AND WELSH GRANITE CO., LTD., all sizes and gradings of crushed granite aggregate. Immediate delivery ex stock.
Liverpool and Preston Depots:
 Office: 7 Piccadilly, Liverpool, 15. (Tel. Sefton Park 7261.)
 Manchester Depot:
 Office: Cornhill Road, Manchester, 15. (Tel. Trafford Park 3830.)
TERN HILL SAND AND GRAVEL CO., LTD., Amington Quarries, near Market Drayton, Staffs. (Tel. Hales 261/2.) (See Staffs. for details.)
TRENTHAM GRAVEL CO., LTD., Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel. Pipe Gate 304/5.) All sizes crushed or washed granite aggregate, concrete and building sand, concrete sand. Plant capacity, 2,000 tons per day.
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel. 4587/8/9.) Local offices and pits: Chorley 3923 and Wigan 82039.
WITHERS LIMESTONE, LTD., Black Lane Quarry, Carnforth. (Tel. Carnforth 327.) Graded limestone aggregate to B.S.S., all sizes. Immediate delivery ex stock.
X.I. GRANITE (INGLETON), LTD., Head Offices: Clapham, via Lancaster. (Tel. Clapham 318/9.) Works Tel.: Ingleton 231. All sizes and gradings of Ingleton granite aggregate.

LEICESTERSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel. Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)
CLIFFE HILL GRANITE CO., LTD., Markfield, near Leicester. (Tel. Markfield 561/2/3.) Granite aggregates to B.S.S. All sizes. Tanned and bituminous granite, concrete slabs and kerbs. Transit-mixed concrete.
DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel. Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)
ENDERBY AND STONEY STANTON GRANITE CO., LTD., 21 New Walk, Leicester. (Tel. 56682.) Quarries at Enderby. London Offices: 29 Dorset Square, N.W.1. (Tel. Amb. 1141.)
GRAVEL HILL SAND QUARRIES, LTD., Prior Park, Ashby-de-la-Zouch. (Tel. Ashby 79.) Works: Hartshorne, Derbs. Yellow screened plastering and building sand, all to B.S.S.
HILTON GRAVELS, LTD., Lymington Fields, near Shardlow, Derby. (Tel. Shardlow 266.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel. Lowdham 3171—15 lines.) (For details see Nottinghamshire.)
MOULDER, G. LTD., 21 New Walk, Leicester. (Tel. 56682.) Quarries at Mountsorrel, near Loughborough. (In pink granite a speciality. London Office: 29 Dorset Sq., N.W.1. (Amb. 1141.)

LEICESTERSHIRE

WANLIP GRAVELS, LTD., Wanlip Road, Syston, Leicester. Any size or grading, scientifically balanced ballast. All to B.S.S. (Tel. Syston 2327 and 2797.)
WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel. 4587/8/9.) (See Northamptonshire.)
WREKKE VALLEY GRAVELS CO., LTD., Melton Mowbray. (Tel. Pits—Rotherby 205 or head office Melton 2488.) All grades washed aggregates and sand.

LINCOLNSHIRE

CONINGSBY SUPPLY CO., LTD., Registered Office: The Broadway, Woodhall Spa, Lincs. (Tel. Woodhall Spa 3150.) Screened limestone, hardcore, pitching stone, ballast, shingle, all quarried or delivered.
DOV-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel. Market Deeping 2301.)
EAST MIDLANDS BUILDERS' SUPPLY CO., 21 Castle-dyke West, Barton-on-Humber, Lincs. (Tel. Barton 2189.) All grades washed sand and gravel, roadstone, hardcore, washed silica sand.
GIBBONS, F. B. AND SONS, LTD., Registered Office: Welby House, Market Deeping, near Peterborough. (Tel. Market Deeping 3321/2383.) Pits at Langtoft, near Peterborough. (Tel. Market Deeping 2210.) All grades washed sand and aggregates.
HARTSHOLME GRAY AND SAND CO., LTD., Hartsholme Wood, Doddington Road, Lincoln. Sole selling agents: Hartsholme Sales, Ltd., 17 West Parade, Lincoln. (Tel. Lincoln 23391.)
HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel. Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)
HURDIS, J. W., LTD., Victoria Street, Grimsby. (Tel. Grimsby 3687.) and Caistor. (Tel. Caistor, Lincs. 281.) Building, plastering, concreting sand, also gravel, ballast, hoggins and roadmaking materials.
PETERBOROUGH QUARRIES, LTD., Sandylands, Maresy, Peterborough. (Tel. Market Deeping 2355—3 lines.) Quarry at Ropsley, all grades of hardcore and broken stone. (See also Northants.)
POLLARD, C. AND SON (TALLINGTON), LTD., House, Langtoft, Peterborough. (Tel. Market Deeping 2140.) All grades washed sand and aggregates. (For Supercrete ready mixed concrete, phone Market Deeping 3132.)
TRENTFORD GRAVELS, LTD., Head Office: Deansgrove, Grimsby. (Tel. Grimsby 5354.) Washed and graded gravel and sand, roadstone, hardcore, slag, tarmac, ashes, etc. Pits and quarries throughout the county.

LONDON

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel. Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)
BUCKBRICKS COMPANY, LTD., 57 Piazza Chambers, Covent Garden, London, W.C.2. (Tel. Covent Garden 0534.) All grades of washed aggregates, sand, building sand, asphalt, grit. Sterilised dry sand accurate graded to buyers' requirements.
COX AND SON, LTD., 33 Southampton Way, Camberwell, S.E.5. (Tel. Rodney 25—3 lines.)
DANGERFIELD, F. J. AND CO., LTD., 261A Finchley Road, N.W.3. (Tel. HAMPSHIRE 8044-8.) Granite limestone or slag, coated or dry, all sizes and pitching, granite kerb and setts, felspar quartz and other minerals by road or rail, or ex London stock.
DORSET LIMESTONES, LTD., Bumpers Lane, Easton, Portland, Dorset. (Tel. Portland 2207/8.) (For details, see Dorset.)
DRINKWATER, W. W. (WILLEDEN), LTD., Dudden Hill Lane, Willesden, N.W.10. (Tel. GLADSTONE 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel. Denham 2241/2/3.) Also Stations Road, Hounslow Heath, Middlesex. (Tel. Hounslow 6222/3.)
GABRIEL, C. LTD., Palmers Lane, Enfield, Middx. (Tel. HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.
GREENHAM SAND AND BALLAST CO., LTD., Chertsey Road, Feltham. (Tel. Feltham 2285/7.) Pits at Hounslow, Feltham and Staines. Concrete aggregates, plastering and building sand.
HALL AND CO., LTD., Chantry House, Eccleston Street, S.W.1. (Tel. Sloane 7122.) and at East Dulwich, Poplar and Wandsworth. Gravel aggregates, washed, plastering and building sand.
HARTIGAN, G. F. X., LTD., Washed sharp sand to B.S.S. 882. (See Buckinghamshire.)
KEEN, W. J. AND SONS, 18 Granville Road, Epping, Essex. (Tel. Epping 5252.) All sands, ballast, shingle and hardcore supplied.
LONDON BALLAST CO., LTD. (Tel. Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.
READ, P. T., LTD., Gates Gardens, Bethnal Green, E.2. (Tel. Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Fairlop Airfield, Forest Road, Ilford, Essex. (Tel. Hainault 6111/2/3.)
ROADS RECONSTRUCTION (1934), LTD., Stockley Lane, West Drayton, Middlesex. (Tel. West Drayton 3041.) All sizes broken limestone, dry and coated to British Standards.

MERIONETHSHIRE

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel. 961.) Salop.

MIDDLESEX

CROSS, GEO. C. AND CO., LTD., Uxbridge Road, Southall. (Tel. Southall 2264/5/6.) Concrete aggregates, hardcore, excavations, demolitions.
DRINKWATER, W. W. (WILLEDEN), LTD., Staines Road, Hounslow Heath, Middlesex. (Tel. Hounslow 6222/3.)
GABRIEL, C. LTD., Palmers Lane, Enfield, Middx. (Tel. HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.
GREENHAM SAND AND BALLAST CO., LTD., Chertsey Road, Feltham. (Tel. Feltham 2285/7.) Pits at Hounslow, Feltham and Staines. Concrete aggregates, plastering and building sand.
GRUNDON, S., 79 Harrington Road, Hillingdon, Middlesex. (Tel. Uxbridge 4156.) Sand, ballast, shingle, hardcore, ashes, excavation and demolition.
HALL AND CO., LTD., Chantry House, Eccleston Street, S.W.1. (Tel. Sloane 7122.) and at Ashford and Brentford. Pit at Bedford, near Feltham. Concrete aggregates, concreting, plastering and building sand.
LONDON BALLAST CO., LTD. (Tel. Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.

CONTRACTORS' GUIDE TO AGGREGATES

MIDDLESEX

READ, P. T., LTD., Gales Gardens, Bethnal Green, E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready-mixed concrete. Pits: Edmonton Gravel Pit, Montagu Road, N.9. (Tel.: Shoreditch 9128/9.) and Fairlop Airfield, Forest Road, Ilford (Tel.: Hainault 6111/2).

STUART MACLEY, LTD., Gordon Road, High Wycombe. (Tel.: High Wycombe 2591/2.)

THAMES SAND AND GRAVEL CO., LTD., Fordbridge Road, Shepperton. (Tel.: Walton-on-Thames 23616.) Gravel aggregates, concreting, plastering and building sand.

WRAYSBURY SAND AND GRAVEL CO., LTD., Pits at Wraysbury. (Tel.: Wraysbury 164.) Gravel aggregates, concreting, plastering and building sand.

MID-WALES

BENRGY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

NASH ROCKS STONE AND LIME CO., LTD., Prestelgne, Radnor. (Tel.: Prestelgne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Quarries in Radnorshire. (Kingston 11.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., LTD., Admaston, Wellington. (Tel.: 961.) Salop.

TERN HILL SAND AND GRAVEL CO., LTD., Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

MONMOUTHSHIRE

IN-SITU CONCRETE, LTD., Victoria Works, Ebbw Vale (Tel.: 3032), and Phoenix Works, Cardiff (Cardiff 63311), for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.

MONMOUTHSHIRE ASSOCIATED QUARRIES, LTD., Head Office: 38 Chepstow Road, Newport, Mon. (Tel.: Newport 55311/2.) Suppliers of all grades of concrete aggregates, road metalling, pitching stone, tarmacadam and bituminous macadam, limestone, dolomite and blue pennant stone. Quarries throughout the county.

WHITECLIFF QUARRIES AND BRICKWORKS, LTD., Coleford, Glos. (Tel.: 3159/9.) (See Gloucestershire.)

MONTGOMERYSHIRE

NASH ROCKS STONE AND LIME CO., LTD., Prestelgne, Radnor. (Tel.: Prestelgne 352.) (See Herefordshire for details.)

SALOP SAND AND GRAVEL SUPPLY CO., LTD., Admaston, Wellington. (Tel.: 961.) Salop.

NORFOLK

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

JOHNSON, P. C. H., LTD., Station Road, Terrington St. Clement, near King's Lynn. (Tel.: Terrington 2441 2/3/4.) Washed and screened gravel, roadstone, washed sharp and fine sands.

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hants. (Tel.: St. Ives 2441 2/3/4.) Washed and screened gravel, roadstone, washed sharp and fine sands. Pits at St. Ives and Knettishall, near Thetford.

SNETTERTON STONE QUARRIES, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamstead 1208/9.) Washed and screened gravel, roadstone, washed sharp and fine sands. Concrete aggregates, building sand.

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 332434.) Washed and graded aggregates, tarmacadam and gravel delivered to all parts of Norfolk and Suffolk.

NORTHAMPTONSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Soars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon, Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogehoe 464) for washed and graded aggregates to B.S.S.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone tarmacadam, dry, pitching stone, hardcore, etc.

BILLING GRAVEL CO., LTD., Station Road, Billing, Northampton. (Tel.: Cogehoe 219.) London Office: 23 Berkeley Square, W.1. (Tel.: Mayfair 6341.)

BRAYBROOK, E. W., LTD., Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S.S., building sand, hardcore.

DOW-MAC (PRODUCTS), LTD., Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) Producers of building and walling stone, roadstone, hardcore, broken stone, ashes, sand, gravel and hoggins. Immediate delivery throughout Northamptonshire.

FERRERS SAND AGGREGATES, LTD., Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all grades of high-quality concrete aggregate to B.S.S. Deliveries throughout Northamptonshire and adjoining counties.

GIBBONS, F. B., AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2353.) (See Lincolnshire for details.)

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

KETTON STONE CO., (Prop.: Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

MACKNESS, A. J., LTD., Ransome Road, Northampton. (Tel.: Northampton 589.) Producers of all grades washed aggregates, building sand, Mixmortar (lime sand mortar). Prompt deliveries.

NINE BARGE AND LIGHTER CO., LTD., Market Chambers, Peterborough (Tel.: 5534/5), and Ship End Quarries, Wansford, near Peterborough (Tel.: Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.

NORTHAMPTONSHIRE

NEWARK (PETERBOROUGH) SAND AND GRAVEL CO., LTD., 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and screened gravel and sand.

PETERBOROUGH QUARRIES, LTD., Sandylands, Masey, Peterborough. (Tel.: Market Deeping 2355.) Eight quarries supplying all grades of hardcore and broken stone. Also Wetmix at Yarwell, Wansford. All grades gravel and sand at Masey.

POLLARD AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

STORTON, F. E., LTD., Weedon Road, Northampton. (Tel.: Northampton 3358.) Producers of washed gravel and sand to B.S.S.

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producers of all grades of washed aggregates in Northamptonshire and Bedfordshire. Regular deliveries anywhere. Local office and pits: Portly Ford. (Tel.: Welford 256.)

NORTH WALES

CAWOOD, WHARTON AND CO., LTD., Pityll Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-y-n-lai 27.) Crushed limestone and tarred macadam, all grades.

CHESHAM AND NORTH WALES TARRED MACADAM CO., LTD., Llanarmon, near Mold. (Tel.: Llanarmon-y-n-lai 43.) Hard, broken limestone, dry, coated to B.S.S. Inquiries to Registered Office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 88094.)

ENSTON BROS., Llwyn Isaf Quarry, Clynog Fawr, Caernarvon. (Tel.: Clynog Fawr 297/8.) All sizes crushed, washed natural sand and gravel. Highest quality. Precast concrete products, ex our Griffiths Crossing Factory, Caernarvon. (Tel.: Caernarvon 2535/6.) Crushed granite ex our quarry, Penwern and Gwydyr Quarries, Ltd., Trefriw, Llanfair, Denbighshire. (Llanrwst 36.)

PENMAENMAWR AND WELSH GRANITE CO., LTD., Quarries at Penmaenmawr (Tel.: 2256/8), and at Trevor (Tel.: Clynogfawr 223), Caernarvonshire. All sizes and gradings of crushed granite aggregate. Any quantity per day: immediate delivery ex stock. Coated granite also available.

RUTHIN AND DENBIGH TARMACADAM CO., LTD., (a member of the Lunt, Denbigh and Pitt Group), Denbigh. (Tel.: Denbigh 75.) Lime, limestone, carbonate of lime, tarmacadam, etc. Also inquiries to Lunt Bros., Ltd., Gazette Buildings, 166 Corporation Street, Birmingham. (Tel.: Central 7408.) and Lunt Bros., Ltd., Stourbridge. (Tel.: 5201—8 lines.)

TERN HILL SAND AND GRAVEL CO., LTD., Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

NOTTINGHAMSHIRE

AIZLEWOOD, DOUGLAS E., Bow Bridge, Rotherham. (Tel.: Rotherham 622.) Crushed and graded limestone; all grades of washed gravel and sands.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

GLEN QUARRIES, LTD., Central Chambers, Wellgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concrete sand, building sand, plastering sand and crushed gravel; could be collected ex quarry or delivered.

GUNTHORPE GRAVELS, LTD., 198a Ltd. (Tel.: Nottingham 77357; and Works: Lowdham 2131.) (An associate company of T. C. Campbell, Ltd.) All grades washed gravel and sand to B.S.S.

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) Quarries at Hoveringham, Holme, Pierrepont, Colwick, Bleasby and Newark. All grades of washed gravel and sand to specifications. Crushed quartzite for surface dressing of roads a speciality. Plant capacity 9,000 tons per day.

NEWARK GRAVEL AND CONCRETE CO., LTD., Grove Street, New Balderton, Newark, Notts. (Tel.: Newark 401.) All grades washed sand and aggregates to B.S.S.

NORTH NOTTS. GRAVEL CO., LTD., Bellmoor, Retford, Notts. (See Yorkshire.)

SALISBURY AND WILCOX, LTD., Matlock. (Tel.: 272/73.) (For details, see Derbyshire.)

OXFORDSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Soars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogehoe 464) for washed and graded aggregates to B.S.S.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

BENRGY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

BICESTER STONE CO., LTD., Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone tarmacadam, dry, pitching stone, hardcore, etc.

CURTIS, J., AND SONS, LTD., Botley Works, Oxford. (Tel.: Oxford 41081/2/3.) Sand and all grades of washed aggregates, kerbs, setts, etc. near Abingdon. (Tel.: Abingdon 441.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAXstead 8044/5.) For all road aggregates, kerbs, setts. (See London.)

DIX, G. H., AND SON, LTD., Freeland, Oxon. (Tel.: Freeland 234.)

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)

GRUNDON, S. (EWELENE), LTD., Ewele, Oxon. (Tel.: Ewele 4156.) All grades washed aggregates. Path hoggins, broken stone, building sand.

HAYDON (WITNEY), LTD., Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.

SNETTERTON STONE QUARRIES, LTD., Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamstead 1208/9.) Roadstone, Cotswold building and walling stone.

WRAYSBURY SAND AND GRAVEL CO., LTD., Theale, Reading, Berks. (Tel.: Theale 373.)

RADNORSHIRE

BENRGY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

CLEE HILL TRANSPORT AND ROLLING CO., LTD., Ludlow, Salop. (Cleehillstone 284.) (See Shrops.)

NASH ROCKS STONE AND LIME CO., LTD., Prestelgne, Radnor. (Tel.: Prestelgne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Quarries in Radnorshire. (Tel.: Kingston 11.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., Admaston, Wellington. (Tel.: 961.) Salop.

RUTLAND

GIBBONS, F. B., AND SONS, LTD., Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2353.) (See Lincolnshire for details.)

HOVERINGHAM GRAVEL CO., Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)

KETTON STONE CO., (Prop.: Andrew's Garage), Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.

PETERBOROUGH QUARRIES, LTD., Sandylands, Masey, Peterborough. (Tel.: Market Deeping 2355.) Quarry at Greetham, all grades of broken stone and hardcore. (See also Northamptonshire.)

POLLARD AND SON (TALLINGTON), LTD., Walk House, Langtoft, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

SCOTLAND

KEIR AND CAWDER, LTD., Kirkintilloch Road, Bishopbriggs. (Tel.: Bishopbriggs 3200.) All grades washed sand and gravel aggregates.

SHROPSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, crushed to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.

BENRGY AND SONS, LTD., Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

CLEE HILL TRANSPORT AND ROLLING CO., LTD., Ludlow, Salop. (Tel.: Cleehillstone 284.) Granite stone, tarmac, chippings, filter media, setts, limestone, crushed and walling stone, gravel, sand, hardcore and ashes.

DORRINGTON SAND AND GRAVEL QUARRIES, LTD., Shrewsbury. (Tel.: Dorington 276.) Supplies of ready mixed concrete, building sand, washed sand, washed and crushed gravel.

DUNNING AND SON, LTD., Haughmond Quarry, near Shrewsbury. (Tel.: Magna 285/7.) All grades of high-quality roadstone, concrete aggregates and coated macadam. All to B.S.S. Any tonnage available for immediate delivery.

NASH ROCKS STONE AND LIME CO., LTD., Prestelgne, Radnor. (Tel.: Prestelgne 352.) (See Herefordshire for details.)

OLD RADNOR TRADING CO., LTD., Kingston. (Tel.: 11.) (See Herefordshire.)

SALOP SAND AND GRAVEL SUPPLY CO., LTD., Admaston, Wellington. (Tel.: 961.) Salop.

TERN HILL SAND AND GRAVEL CO., LTD., Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)

TRENT VALLEY GRAVEL CO., LTD., Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concrete sand. Plastering sand. Plant capacity: 2,000 tons per day.

SOMERSET

ASHAM QUARRY CO., LTD., Chantry, Frome. (Tel.: Nunney 351.) All sizes limestone block, broken and aggregates. Tarred and bituminous macadam to B.S. Ex quarry and delivered.

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAXstead 8044/5.) For all road aggregates, kerbs, setts. (See London.)

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., Longmoor House, Ashton Vale Road, Bristol. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.

ROADS RECONSTRUCTION (1934), LTD., Stoneleigh House, Frome. (Tel.: 336.) All sizes broken limestone, dry and coated, to British Standards. Precast concrete products.

WAINWRIGHT, JOHN, AND CO., LTD., Shepton Mallet. (Tel.: Shepton Mallet 2366/7.) All sizes basalt, coated basalt, concrete aggregates, filtering media, building blocks and slabs.

SOUTH SCOTLAND

ESK MANUFACTURING CO., LTD., Carlisle. (Tel.: Carlisle 2-4941.) (For details, see Cumberland.)

SOUTH WALES

IN-SITU CONCRETE, LTD., Victoria Works, Ebbw Vale (Tel.: 3032), and Phoenix Works, Cardiff (Cardiff 63311), for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.

PENMAENMAWR AND WELSH GRANITE CO., LTD., 18 Quay Street, Cardiff. (Tel.: 20646/7.) All sizes and gradings of crushed granite aggregate from our Cardiff and Swansea Dock Depots. Dolomite aggregates from Ewenny Quarry, Bridgend. (Tel.: Bridgend 3786.) Coated stone also available.

SESSIONS AND SONS, LTD., West Dock, Cardiff. Producers of coarse and fine aggregate, dredged and graded to British Standards. Branches Newport and Swansea. (Also Gloucester and Hereford.)

SOUTH WALES SAND AND GRAVEL CO., LTD., Head Office: P.O. Box 8, Beaufort Buildings, Swansea. (Tel.: Swansea 53071.) Sand and gravel merchants, builders' merchants, Pennant Quarry owners, slag, hardcore, ashes, filling, graded clinker filter media. Depots: Cardiff, Newport, Barry, Port Talbot, Briton Ferry, Swansea, Llanelli.

STAFFORDSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.

CONTRACTORS' GUIDE TO AGGREGATES

STAFFORDSHIRE

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1225/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

CROXDEN GRAVEL, LTD., Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 395.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.

DUNNING AND SON, LTD., Wood End Gravel Pits, Hednesford. (Tel.: Hednesford 302/325.) Washed sand and gravel. All to B.S.S. High-quality roadstone, concrete aggregates and coated macadam from our Haughmond Quarry, near Shrewsbury. (See Shropshire.)

GRAVEL HILL SAND QUARRIES, LTD., Tel.: Ashby (Leics.) 79. (See Leicestershire for details.)

HILTON GRAVEL, LTD., Cheadle, Staffs. (Tel.: Tean 241.) Also at Longton, Stoke-on-Trent (Tel.: Longton 32196) and Stretton, Burton-on-Trent (Tel.: Burton 6061).

HULLAND GRAVEL CO., LTD., Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

RUGELEY GRAVEL CO., LTD., Rugeley, Staffs. (Tel.: Rugeley 251/2.) Entirely modern plant. Sand classifiers. Finest aggregates to B.S.S. Large output.

SALISBURY AND WOOD, LTD., Matlock. (Tel.: 272/273.) (For details, see Derbyshire.)

SHIRE OAK GRAVELS, LTD., Lichfield Road, Walsall Wood, Staffs. Washed crushed gravel and washed sand. (Tel.: Brownhills 3253.)

TERN HILL SAND AND GRAVEL CO., LTD., Alimington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Pit sand, concrete sand, and all grades of washed crushed gravel. Hardcore, clinkers, ashes and hoggins.

TRENTHAM GRV. CO., LTD., Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plant capacity 2,000 tons per day.

WINDMILL SAND AND GRAVEL QUARRIES, LTD., Cannock Road, Wolverhampton. (Tel.: 31108.) Concrete aggregates, plastering, building and asphalt sand. All to B.S.S.

SUFFOLK

ALRESFORD SAND AND BALLAST CO., LTD., Alresford Creek, near Colchester, Essex. (Tel.: Wivenhoe 341/436.) Suffolk area pits at Bures and Stoke-by-Nayland. All grades washed aggregate sand, also hoggins.

BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD., near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)

DICKERSON, M. (CONTRACTORS), LTD., Gloucester Street, Cambridge. (Tel.: Cambridge 56973/4.) (See Cambs.)

HALL AND CO., LTD., West End Road, Ipswich. (Tel.: Ipswich 55993/4.) Pits at Kesgrave and Homersfield, near Harleston. Gravel aggregates, concreting, plastering and building sand.

MACLAREN BROS. (KENNETT), LTD., Station Road, Kennett, Cambs. (Kentford 335/4.) (See Cambs.)

ST. IVES SAND AND GRAVEL CO., LTD., 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4, Conay Weston 12 and Halstead 2323.) Pits at St. Ives, Knettishall, near Thetford, and Gosfield, near Halstead.

THORPE GRAVEL PITS, LTD., Harvey Lane, Norwich. (Tel.: Norwich 33243/4.) (See Norfolk.)

WEBB, G., CAMBRIDGE, 35 Magrath Ave., Cambridge. (Tel.: 59966, 53969, 50535 (night).) (See Cambs.)

SURREY

COFF, HARRY A., LTD., Buckhurst Hill, Cheapside, Ascot, Berks. (Tel.: 1026/7.) (See Berkshire.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)

EASTWOODS SALES, LTD., Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2040.) Longside Sand and Ballast Pit, Thorpe, nr. Egham. (Tel.: Egham 3121.) Runfold Sand and Ballast Pit, Runfold, nr. Farnham, Surrey. (Tel.: Runfold 2020.) Producers and distributors of all grades of washed aggregates.

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

SURREY

HALL AND CO., LTD., Victoria Wharf, Croydon. (Tel.: Croydon 4444.) Other main depots at Coulsdon, Epsom, Mitcham, Oxted, Purley, Redhill, Tadworth and Woking. Pits at Send and Reigate. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete, shingle, ballast, etc. (Tel.: 3497.) (See Sussex.)

JANES AND CO., LTD., 2C Buckingham Avenue, Slough. Sand, aggregates, hardcore, ashes, building & bulk excavation. (Tel.: Slough 20361/2/3.)

LONDON BALLAST CO., LTD., (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.

MARCO (AGGREGATES), LTD., Pit: Norlands Lane, Thorpe, near Egham. (Tel.: Chertsey 3401.) Producers and distributors of high-grade washed sand, shingle, ballast, etc.

MARCO (CROYDON), LTD., Hampton Road, West Croydon. (Tel.: THORNTON Heath 4236/7/8.) All building and road aggregates.

WELLS, A. L., AND SON, LTD., Builders' Merchants, Garlands Road, Leatherhead. (Tel.: 3018/9.) Sand aggregates, hardcore, ashes, cement. Clinker block manufacturers.

SUSSEX

AVANN, F., Cavendish Avenue, Eastbourne. (Tel.: 4969/70.) Washed and graded ballast, sand, bricks, breeze and concrete blocks, hardcore, clinker, tarmac, etc., supplied.

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

HALL AND CO., LTD., 16 Chapel Road, Worthing. (Tel.: Worthing 7840.) Other main depots at Bexhill, Bognor, Crowborough, East Grinstead, Eastbourne, Horsham, Hove and Seaford. Pits at Washington, Crumbers, near Eastbourne, Chichester, Rye Harbour, Midhurst, Shoreham and Portslade. Gravel aggregates, concreting, plastering and building sand, Surecrete precision-mixed concrete.

HARRIS, M. P., AND CO., LTD., West Station Goods Yard, Bexhill (Tel.: 61); Cavendish Place, Eastbourne (Tel.: 3800); Dominion Road, Worthing (Tel.: 8822); Station Road, Northiam (Tel.: 2111); Station Goods Yard, Haywards Heath (Tel.: 1750); Crawley Road, Horsham (Tel.: 3366); The Hornet, Chichester (Tel.: 4181). All grades aggregates, hardcore, clinker, ashes, etc.

WRIGHT, C., AND SONS, (BTON), LTD., 19 Bristol Gardens, Brighton, 7. (Tel.: Brighton 63357 and 62406.) All-in ballast, washed and crushed shingle, sand, ashes, hardcore, chalk, bricks, etc.

WARWICKSHIRE

BALLIDON QUARRIES, LTD., Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output reliable deliveries.

DUSTON STONE QUARRIES, LTD., New Duston, Northampton. (Tel.: Brixworth 276 and 298; Duston 505.) (See Northamptonshire.)

HALL AND CO., LTD., 188 Lichfield Road, Four Oaks, Sutton Coldfield. (Tel.: Four Oaks 356.) Gravel aggregates, concreting, plastering, building sand.

JUDKINS, LTD., Granite Quarries, Tuttle Hill, Nuneaton. (Tel.: Nuneaton 3411—10 lines.) All sizes washed granite aggregate, tarred and bituminous macadam, slab mix a speciality.

SHIRE OAK GRAVELS, LTD., (See Staffordshire.)

WELFORD GRAVELS, LTD., Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire and Northamptonshire.)

WESTMORLAND

BROOMBYS, LTD., Sandside, Milnthorpe, Westmorland. (Tel.: Milnthorpe 3251/2.) All grades washed crushed gravel sand, limestone, granite chippings, pitching, tarmacadam, rockery stone, etc.

ESK MANUFACTURING CO., LTD., Carlisle. (Tel.: Carlisle 2-4941.) (For details, see Cumberland.)

WILTSHIRE

AMEY'S AGGREGATES, LTD., Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.

WILTSHIRE

BULL BROS., S. AND L., LTD., 126A High Street, Winchester. (Tel.: 2264.) (See Hampshire.)

COKE, T. F. (CHELTENHAM), LTD., 267 Gloucester Road, Cheltenham. (Tel.: 4717/4874.) (See Glos.)

DANGERFIELD, F. J., AND CO., LTD., 261A Finchley Road, London, N.W.3. (Tel.: HAMPSHIRE 8044/8.) For all road aggregates, kerbs, setts. (See London.)

GILSON, S. C., AND SONS, LTD., Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)

MOREYS (VERWOOD), LTD., Verwood, Wimborne Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggins, path gravel.

POOLE (LECHLADE), LTD., Gravel Pit, Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)

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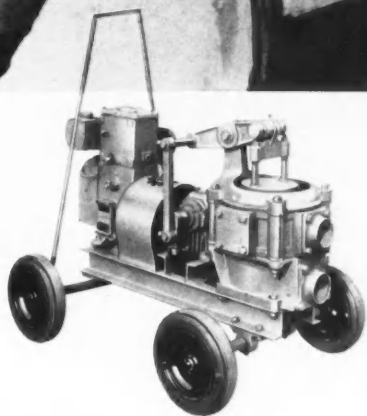
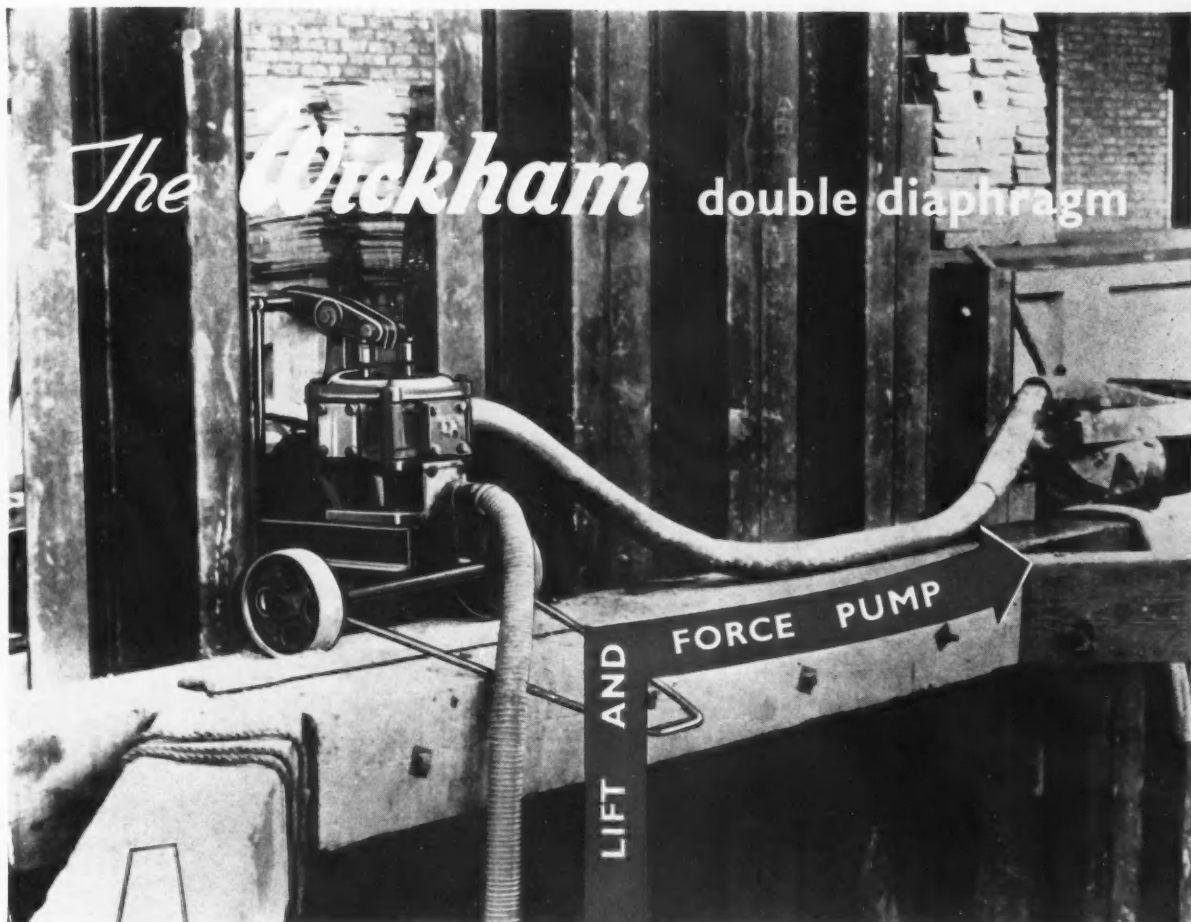
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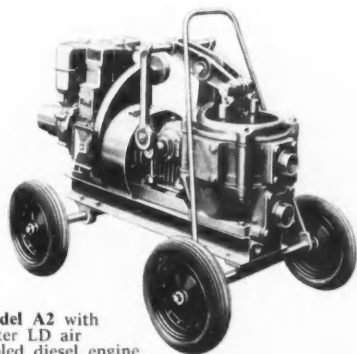
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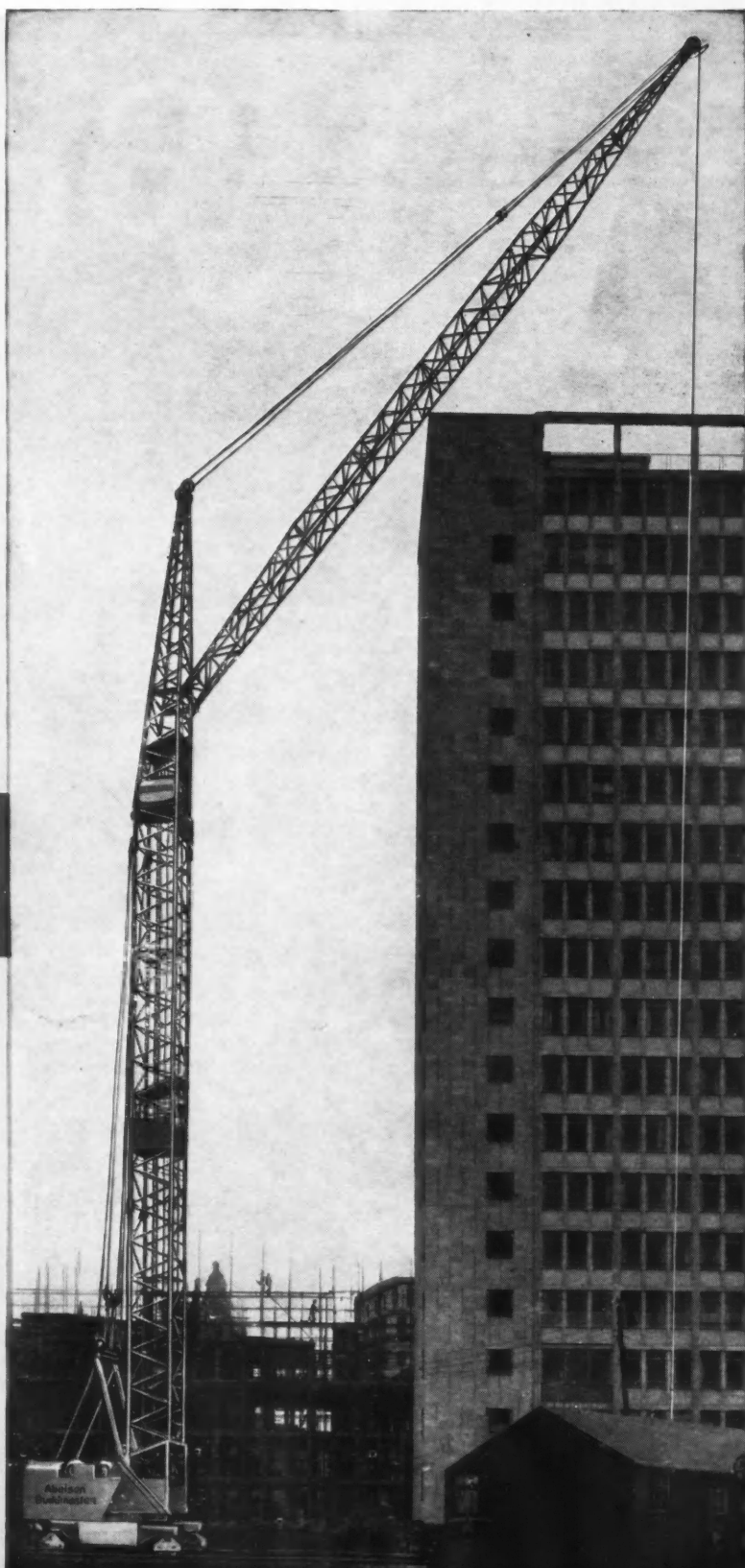
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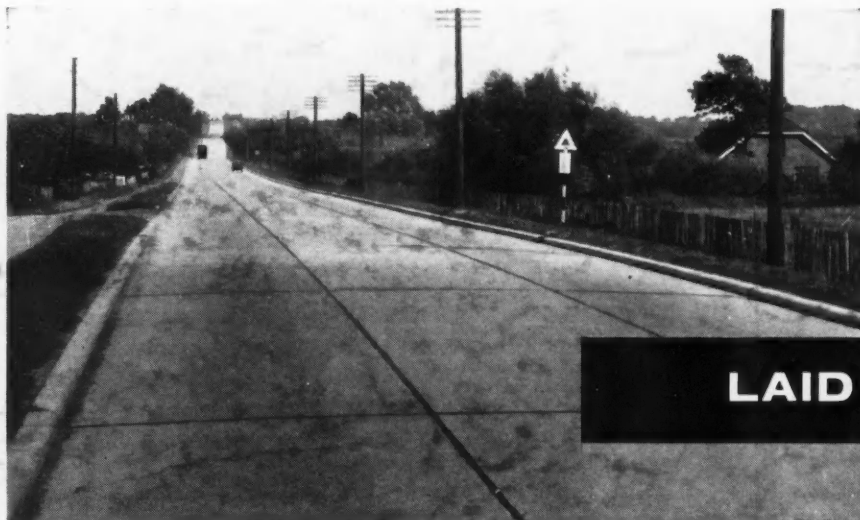
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*A photograph of the Dicker
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